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BusinessWeek

A PUBLICATION OF THE MCGRAW-HILL COMPANIES

1999

**THE WARREN
BUFFETT
YOU
DON'T
KNOW**

An inside look at how he's building a corporate empire

BY ANTHONY BIANCO PAGE 54

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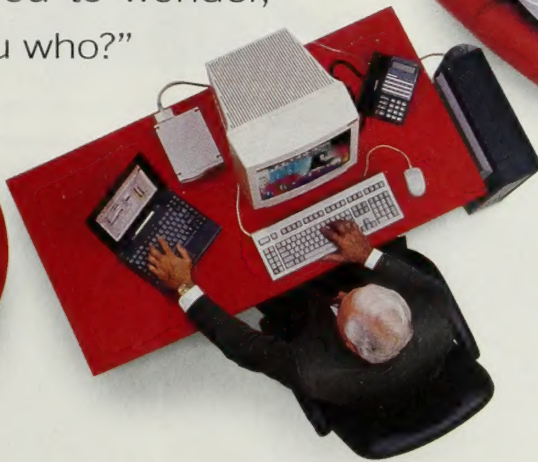
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**JUST A REMINDER,
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COLOR THAT'S BIG IN THE
COMPUTER BUSINESS.**



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you know another leader, too. That's
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 and workhorse printers. ∞ Why are we telling you
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No matter what you're into, you'll get a lot of it into the all-new, 7-passenger V-6 Honda Odyssey. Like soccer balls. Or boogie boards. Or seventy soccer balls. (And that's before folding away the third-row Magic Seats.)

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sports car.



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e all-new Odyssey. It's one big happy minivan.  **HONDA**



BusinessWeek

JULY 5, 1999

Cover Story

54 BUFFETT THE ACQUIRER

Warren Buffett is known the world over as a stockpicker extraordinaire. But few people realize that in the past few years, he has become an empire builder, too. Buffett has been buying companies outright—and paying premiums for them, which he was loath to do in the past. Senior Writer Tony Bianco spent some time traveling and talking with the “Oracle of Omaha” to find out what’s going on at Berkshire Hathaway

News: Analysis & Commentary

24 WHOSE CABLES ARE THEY?

Court rulings on whether AT&T and others must provide open Net access have set off a firestorm of debate

26 THE ABCs OF OPEN ACCESS

Just what is the fight between AT&T and the Internet service providers about? A few answers

27 COMMENTARY: GREENSPAN

A few of the measures that may guide the Federal Reserve chairman in his decision on interest rates

28 SATURN'S UNCERTAIN ROAD

With new, larger models, can the maverick carmaker maintain its distinctive stance within GM?

29 STEEP GRADE FOR A RAIL DEAL

Taking over Conrail is snarling CSX and Norfolk Southern

30 BOEING: NO PICKET LINE?

Unions want to make sure that Phil Condit stays CEO so they won't have to deal with a hardliner

32 COKE'S CLASSIC SNAFU

The contamination scare could hurt expansion plans

34 THE IMPORTANCE OF THE U.S. OPEN

Winning it can dramatically boost your fortunes. Just ask Payne Stewart

34 COMMENTARY: DVD

Why it trounced a rival digital video technology

36 IN BUSINESS THIS WEEK

International Business

42 JAPAN: HONDA GOES IT ALONE

In the wake of DaimlerChrysler, Ford-Volvo, and other deals, Honda seems a holdout. Should it look for a partner?

45 'SWEET HOME ALABAMA'

Honda breaks the mold with factory in Lincoln, Ala.

47 INTERNATIONAL OUTLOOK

Russia's peace prize: Closer to the West

Economic Analysis

16 ECONOMIC VIEWPOINT

Tyson: Keep the gates open for high-skill immigrants

18 ECONOMIC TRENDS

Smokers' addiction vs. price end of bigotry in baseball, a rate jump's true impact

21 BUSINESS OUTLOOK

U.S.: Good and bad news—Spain: Growth is easing job

Government

41 WASHINGTON OUTLOOK

GOP Presidential hopeful Ge sends Al Gore a message: Y own Silicon Valley

48 MEET THE NEW MONEY HUN

A different breed of fund-r up for Campaign 2000

COVER STORY

TTT REVEALED

"The fire is my painting," says
"so it should look the
want it to look." And he
to stay exactly that way
's gone page 54



R SCRUTINY

Investigation of
ware's CEO page 74



ILL LUCK

Nursing
homes are no
longer Street
darlings

page 68

nce

ING HOMES: ON THE SICK LIST

ident deals from the go-go '90s
et-rich-quick schemes have left the
ry in a shambles

MENTARY: STOCK PRICING

mind the "fraction faction." Here
71 reasons why decimals will
t the stock market

VUITTON ONLINE?

rd Arnault, chief of posh retailer
has become an E-presence

STREET'S SEAMY SIDE

ds aim at big game in their
igation of mob involvement in the
ies industry

le

WARE'S BOARDROOM DILEMMA

ompany's handling of the sex-
ment claim against its CEO is a
ok case of how not to do it

MENTARY: HARASSMENT

est way for a company to respond
gh-level harassment claim is to
completely impartial investigator



SOFTWARE STAR

How far can Red Hat ride the
Linux operating system? page 88



POINT ONE

Brokers
should use
the decimal
system page 70



GOOD TERMS

Grab those cheap
insurance policies
while you can page 92

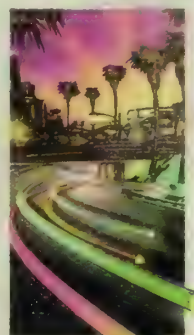


AT A CROSSROADS

Will a different kind of Saturn
still be a Saturn? page 28

OPEN OR SHUT?

The debate
over who
gets Net
access via
cable page 24



Information Technology

20 TECHNOLOGY & YOU

Readers are nearly unanimous:
Microsoft Office is too complicated, too
big, too crash-prone, and too expensive

85 CAN RED HAT STAY RED-HOT?

The scrappy software upstart, with its
freebie Linux system, may never be
more than a passing fad

88 IBM LEARNS TO SERVE

Big Blue, after falling far behind, comes
roaring back in PC servers, snatching
business back from Compaq

BusinessWeek Investor

92 BARGAIN DAYS FOR LIFE INSURANCE

Competition and the Internet have
slashed rates for term policies—but that
may not last

94 OUTDOING THE INDEX FUNDS—OR NOT

More frequent stock turnover doesn't
necessarily produce higher earnings for
investors

96 TRACKING A HIGH-TECH STAR

How John Leo keeps his Northern
Technology fund aloft

98 THE BARKER PORTFOLIO

If it's time to (yawn) change your
annuity, here's how to figure out what
will work best

99 GENE MARCIAL: INSIDE WALL STREET

Features

6 UP FRONT

10 READERS REPORT

11 CORRECTIONS & CLARIFICATIONS

14 BOOKS

Woodward: *Shadow: Five Presidents
and the Legacy of Watergate*

15 BUSINESS WEEK BEST-SELLER LIST

51 DEVELOPMENTS TO WATCH

Video games that heal, newfangled
ovens that provide haste and taste,
firebreaks for rain forests

100 FIGURES OF THE WEEK

101 INDEX TO COMPANIES

102 EDITORIALS

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Up Front

EDITED BY JOAN OLECK

BELTWAY BRAWLS

SONNY GET YOUR GUN

CONGRESS DOESN'T SEEM inclined to do anything about adults with guns. But kids are another matter: Law-

Federal law prohibits kids under 18 from buying guns; those under 21 may not buy handguns. Yet a Harrington & Richardson revolver ad, in the National Rifle Assn. teen magazine *InSights*, is headlined "The Right Way to Get Started in Handgunning." The gun is offered as "a clean, neat package to get off to a good start in handgun shooting."

Even the NRA's own Eddie Eagle, a cartoon character used in child gun-safety programs, is under assault. "These ads are the gun version of Joe Camel," says Senator Barbara Boxer (D-Calif.). "This is pushing handguns on kids." The NRA had no comment. But

gunmakers are confident their ads will pass muster. Doug Painter, executive director of the National Shooting Sports Foundation, says comparing gunmakers to the tobacco industry is unfair. "Hunting and target shooting have for decades been traditions of value in this country. I don't think you can say the same thing about tobacco." Maybe. But this is politics.

Lorraine Woellert

HARRINGTON & RICHARDSON
929 SIDERICK REVOLVER

THE RIGHT WAY TO GET STARTED IN HANDGUNNING

For a clean, neat package to get off to a good start in handgun shooting, Harrington & Richardson has deer something to satisfy your demand.

H&R 1971, Inc., Industrial Road, Gardner, MA 01440

Letters

Invest In Freedom For Future Generations

Through An NRA Endowment

PLANNING



makers this summer are expected to order up a study on whether certain gun ads appeal to children.

THE LIST RIDING THE BULL TO THE 21ST CENTURY

As the new millennium approaches, U.S. blue-chip stocks are still the favorite investment of the richest 1% of Americans—those with a net worth of more than \$3 million or adjusted gross income of more than \$225,000 a year. More than one-third believe

that the bull market in stocks will continue for at least two more years.

U.S. BLUE-CHIP STOCKS	40%
VENTURE CAPITAL	18%
U.S. SMALL-CAP STOCKS	14%
REAL ESTATE	9%
INTERNATIONAL STOCKS	8%
GOLD OR OTHER PRECIOUS METALS	6%
FIXED-INCOME BONDS	3%

April survey of 150 affluent Americans
DATA: U.S. TRUST CORP.



TALK SHOW "We should give it a decent burial."

—Senator Fred Thompson (R-Tenn.), former lead Republican lawyer for the Senate Watergate Committee, recommending the independent counsel law be allowed to expire

THE GLOBAL ECONOMY

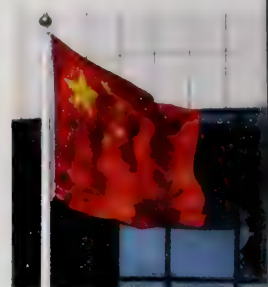
A WARM FRONT IN CHINA?

IT'S A GAME OF CHINESE chicken. Anti-U.S. fervor is still high in Beijing since the embassy bombing in Belgrade. But Chinese officials want to break the ice with the U.S. to ease China's entry into the World Trade Organization before a November deadline. Can they have it both ways? You can bet your yuan they'll try.

One clear—and odd—sign of that political straddle is a rumor circulating at Beijing University. The rumor, says an economics professor there, is that maybe Bill Clinton wasn't responsible for the bombing at all. "Maybe radical people in the U.S. military, or conservatives somewhere who had something to gain" masterminded it.

Another sign: Official news

agency Xinhua not reprinted the U.S. edition for the bombing in detail than even Wash provided but gave the version equal billing with jing's "official" rejection. The new mood may



EMBASSY: Rebuilding

sign of things to come. dicts Richard Margolis, mer diplomat now at M Lynch in Hong Kong: talks will resume." And, sources in Beijing: Off may be trying "to pr public opinion" for a me of ties. Mark Cl

AFTERLIVES

THIS CITI EXEC NEVER SLEEPS



WRISTON: Consistent

ONCE A WEEK, WALTER WRISTON strolls into the lobby of Citigroup headquarters in New York to use an ATM. But that's as far as he goes. Since retiring as chairman of what was then Citicorp, in 1984, Wriston has kept a respectful distance. "I don't think it's appropriate for the old character to give advice."

Not that Wriston, now 79,

is the retiring type. H director of four compa including impotence-drug developer Icos. And he's w a book on the New E my. "The issue I'm tryi fool around with is, is it ly a 'new economy' or the same old thing w few new bells and whist Wriston says. "I believe a new economy and it have some new rules, b the transitional period, of the old rules still app

Wriston still applies hi in his Manhattan office which he commutes on "I've been walking to for 50 years," he says. consistency extends to opinions. He still favors regulation: "If they wan banking business to sur it has to be given more dom." And he remains a of Citi, which, Wriston "is making tracks in its snow." High praise fro banker who has made a of his own. Gary Silver

1 Goal! Game! Championship!
Just one thing was missing.

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Innovation

Up Front

PRODUCT PEEK

A SILVER BULLET FOR BACTERIA



HERE'S A REAL SILVER LINING: A Westport (Conn.) company has announced a new inorganic silver-and-sand compound that it says will kill bacteria without creating the resistant strains that typically plague the medical community.

The compound, HealthShield, can be used to coat bath mats, kitchen utensils, and even heart valves, claims

creator HealthShield Technologies. So if you forget to wash your cutting board after trimming raw chicken, you may still avoid contaminating your tomatoes. "It will act as a safety net for busy people who may not think about cross-contamination," says John Barry, vice-president for product development.

That's good, considering that more than 1,200 Americans die each year from *E. coli* and salmonella poisoning, and millions more get sick, according to federal statistics. Silver also has a history: People have used it for centuries to prevent infections, and to line water barrels and communion chalices. Silver molecules attack bacteria in several ways, making it harder for the bacteria to develop resistance.

Still, silver is no cure-all. Even with the whole world coated in the stuff, bacteria would ultimately become resistant—and outlive all us humans. *Stacey Higginbotham*

ZEN AND NOW

JAPAN: BIG BUCKS FOR FOILING BURGLARS

JAPAN HAS LONG PRIDED itself on having the safest neighborhoods in the industrialized world. But its long recession has triggered a jump in burglaries. What's bad news for upscale Osaka and Tokyo, however, is good news for leading security-systems provider Secom.

"I feel very good now," says founder Makoto Iida. He should: For the year ended in March, his 37-year-old company rang up \$2.9 billion in revenues and profits of \$400 million. Secom's return on equity, 8%, is stupendous by Japanese standards. And demand for its \$80-per-month system, which uses sensors to detect intruders and set off an alarm, has grown 20% per year since the mid-1990s.

Analysts are even enthusiastic about such low-tech Secom products as an ultrasticky doormat that immobilizes thieves at store entrances.

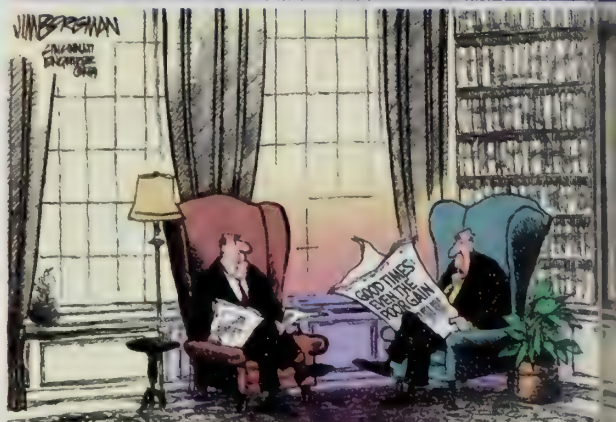
Iida and CEO Toshitaka Sugimachi haven't stopped at home security. They have



TOKYO JAIL: Crooks beware

purchased an insurer, and now offer a car-accident policy that rushes staff to crash sites to advise victims. Also in the works: encryption and electronic ID systems for the Internet. The upshot? Asian thieves had best beware. *Miki Tanikawa*

DRAWN & QUARTERED



"WELL, IF THE ECONOMIC BOOM BENEFITS EVERYONE, WHAT GOOD

FWAY PATROL

A PATRON SAINT FOR WEB SURFERS?

IF YOUR BROWSER MISBEHAVES and tech support doesn't show for 30 minutes, why not pray to the patron saint of the Net? No, not Jim Barksdale or Bill Gates. We're talking Saint Isidore of Seville.

Internet users in Spain hope to have the 7th century scholar widely accepted as a patron saint of the Web. Patron saints are named by popular decree, in contrast to saints, who are canonized by the Catholic Church. But even clergy like the idea of Saint Isidore. "It would be difficult to want to



go to a degrading site where were praying for peace and grace," says Father Zuhlsdorf of Cal Online.

A precedent exists: vision's patron saint Clare of Assisi, from 11th century France, had miraculous ability to see and hear a Christmas mass from away.

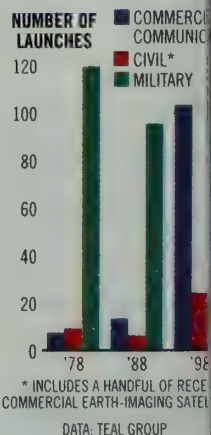
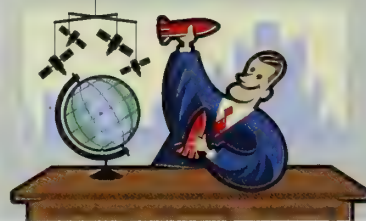
Techies chose Isidore because Spaniard helped organize an early binary—a medieval base. Already, Spaniards are asking Isidore to keep servers humming to cure their virus.

With a third of households alone expected to be online by 2000, Isidore could become one busy successor. *Stacey Higginbotham*

THE BIG PICTURE

WARHEADS INTO SATELLITES

Commercial communications satellites made up less than 10% of annual launches until the late '80s, when the cold war ended. Communications satellites now far outnumber military ones.





*The best thing about the future
is that it only comes one day at a time.*

—Abraham Lincoln

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VALUE INVESTING, MY EYE

Nice try. Jeffrey M. Laderman and William Miller can call it "new value investing" if they want to, but I know growth stocks when I see them ("Value investing is back—with a twist," Cover Story, June 14). If Bill Miller is a value investor and if AOL, Dell, and Microsoft are value stocks, then Graham and Dodd are surely turning in their graves.

If you want to enjoy success as an investor in a low-inflation era, buy growth. Remember the "Nifty Fifty" growth-stock era that ran from the onset of low inflation in the 1950s to the OPEC oil embargo of the early 1970s? After the embargo, with inflation raging, value investing became king. Someday, for much the same reasons, value will be king again. As for now, growth rules.

Thomas F. Heald
 Eads & Heald Investment Counsel
 Atlanta

THE U.S. SHOULD STOP WAVERING ON TAIWAN

I recently came back from living in Taiwan for 1½ years, and I can assure you the Taiwanese understand the Chinese threat to democracy in Taiwan ("Will China-bashers in Congress show-er Taiwan with arms?" International Outlook, June 7). They also understand that mainland China will one day "re-claim" Taiwan, and that the Taiwanese will be unable to beat China in any militaristic show of force without help from other countries (Taiwan's population is 22 million, China's is 1.4 billion).

Yet the U.S. may, of its own accord, lavish weapons on a Taiwan that doesn't want them. Clearly, U.S. lawmakers want to arm Taiwan for one reason: to provide jobs for their constituents.

If we arm Taiwan, will we be prepared to help them use the weapons against China and fight for Taiwanese independence? I doubt it; the consequences are too great. Hence, U.S. lawmakers are asking for trouble—souring our already tense relations with China

and creating even more hard feelings between China and Taiwan. The U.S. needs to stop wavering in its stance and either fully support Taiwanese independence from China, or not at all.

Whitney C. ...

THE INTERNET IS NOT BRINGING PEOPLE TOGETHER

How ironic that your artwork "Open all night" (News: Analysis & Commentary, June 14) is a spoof of Howard Hopper's *Nighthawks*. Long before the Internet era, Hopper was portraying the alienation in America. Contrary to what those besotted with computers believe, technology is bringing people closer together, not driving them further apart. When people mistrust or do not know their neighbors, the fabric of community is shredded. Talking with strangers away through a chat room does not reverse the alienation Hopper documented, which continues to this day.

Deborah C. Sa ...
 B

MICROSOFT CAN AFFORD A SPENDING SPREE

In "Who do you want to buy to" (News: Analysis & Commentary, June 14), author Michael Moeller highlighted the recent "investments" by Microsoft. He noted the strategic fit of several of the acquisitions with Microsoft's goals, such as its \$5 billion investment in

The economics of corporate finance point to a more obvious purpose for these acquisitions. Microsoft's capacity to generate cash is embarrassing. Vast businesses generate cash in excess of ordinary business needs, they have options. Management can admit that shareholders are better able to invest this cash and declare a dividend. Alternatively, companies can invest excess cash on shareholders' behalf.

In the past, Microsoft has used its cash to build a solid portfolio of Treasury securities. Chief Financial Officer C

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DIRECTIONS & CLARIFICATIONS

... was inadvertently dropped from manufacturing was never on the floor," ... ders Report, June 14). The affected graph should have read: "In 1991-98, manufactured output grew by 3.8% per year, while gross domestic product in manufacturing grew by an estimated 3.4% per year. By comparison, GDP in nonfarm ... grew by only 3% annually. From 1981-98, manufacturing productivity grew 7% annually, more than double the productivity growth rate of the overall non-business sector."

... eers provided an incorrect Web site address in "Be your own jeweler—on Net," (Bits & Bytes, June 14, in ... editions). The correct address is ... adiamondisforever.com.

... i probably sensed that shareholders would soon question this strategy. To ... vere watering down company earnings while causing an embarrassing ... em in the face of government ... ny. If cash is a symptom of a mo- ... y, Microsoft is a big one. Account- ... generally associate T-bills closely ... cash on financial statements, and ... soft's was growing beyond several ... of company expenses. ... th government regulators apply- ... pressure and with shareholders' ... expectations, Microsoft had little ... e but to enter the acquisition trail ... big way. Look for Microsoft to turn ... e heat on its acquisition binge as a ... er of necessity.

Scott Moser
Bellevue, Wash.

SKILL IMMIGRANTS DRIVING DOWN WAGES

... amigrants' economic woes" (Eco- ... Trends, June 7) did an excellent ... of highlighting the impact that the ... nt high level of low-skill immigra- ... has on immigrant workers. Ac- ... g to the U.S. Labor Dept., 35% of ... grants who arrived in the 1990s ... ot have a high school diploma. (By ... arison, only 9% of native workers ... a high school diploma.) ... th the job market saturated with ... skilled immigrants while the need ... uch workers declines, it is not sur- ... g that average hourly wages for ... school dropouts has fallen by 26% ... l terms over the past 20 years. ... e Labor Dept. and various industry ... sts project that virtually all future ... job growth will require workers ... an education beyond the high ... l level, while the number of jobs

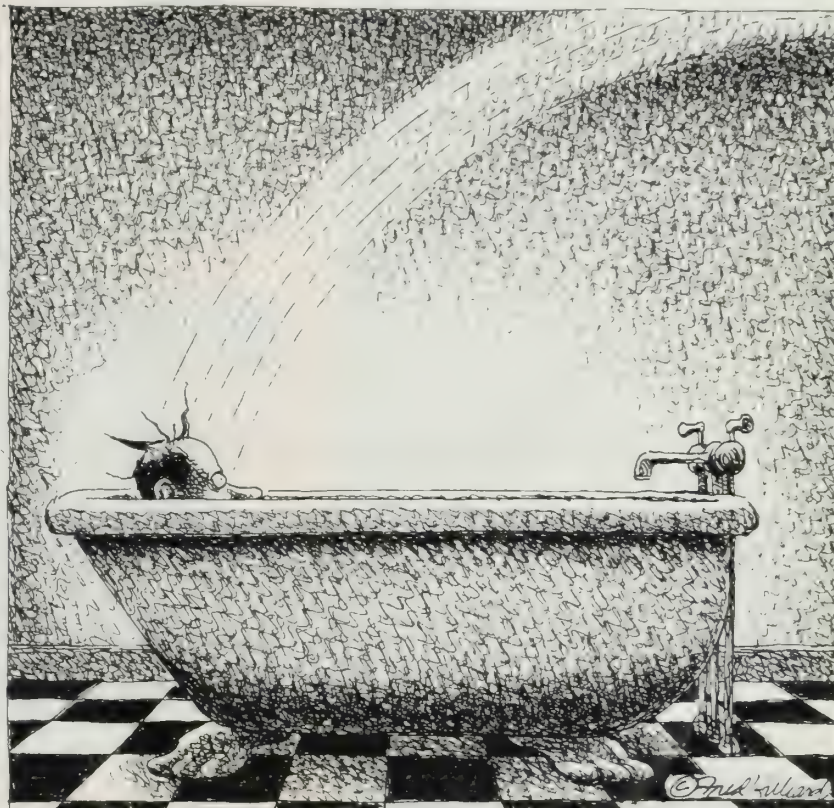
that require less than a high school education will stagnate. Yet our immigration policy is going in the opposite direction, bringing in increasing numbers of uneducated workers while industries face growing shortages of skilled workers. You are right that policymakers need to focus on this problem.

Lamar S. Smith (R-Tex.)
Chair
House Subcommittee on
Immigration & Claims
Washington

'ACTING ON PRINCIPLE IS A DANGEROUS THING TO DO'

I'm the Sheila McGough of *The Crime of Sheila McGough*, by Janet Malcolm. As your reviewer noted in "Legal Puzzler" (Book Briefs, May 24), Malcolm concluded I wasn't guilty as charged. I'm glad and grateful for that. But I disagree with her about the meaning of the case. To me, it's simply that acting on principle is a dangerous thing to do. I insisted that an ordinary

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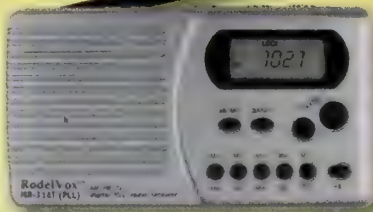
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Readers Report

man was entitled to the same representation of his interests in both civil and criminal defense matters that the rich, the celebrated, and the notable get as a matter of course. Their lawyers are aggressive and persistent, and they are closing "bad facts," craft legal maneuvers to fit the situation, and protect the client in any way they can within the law.

So did I. The difference was that I was so put me in the way of some of the prosecutors who used their considerable power to be rid of me permanently. I lost my civil rights, my career, my freedom for several years before, even with the help of good legal counsel, I was no match for lawyers who could get away with using lies to obtain conviction. Malcolm found me innocent because I kept writing and talking about evidence of prosecutorial misconduct. I told her she needed to go beyond government witnesses telling stories and ask who directed the lies. Tiresome, maybe, but here in the Washington area, we call it staying the message.

Sheila M. Alexander

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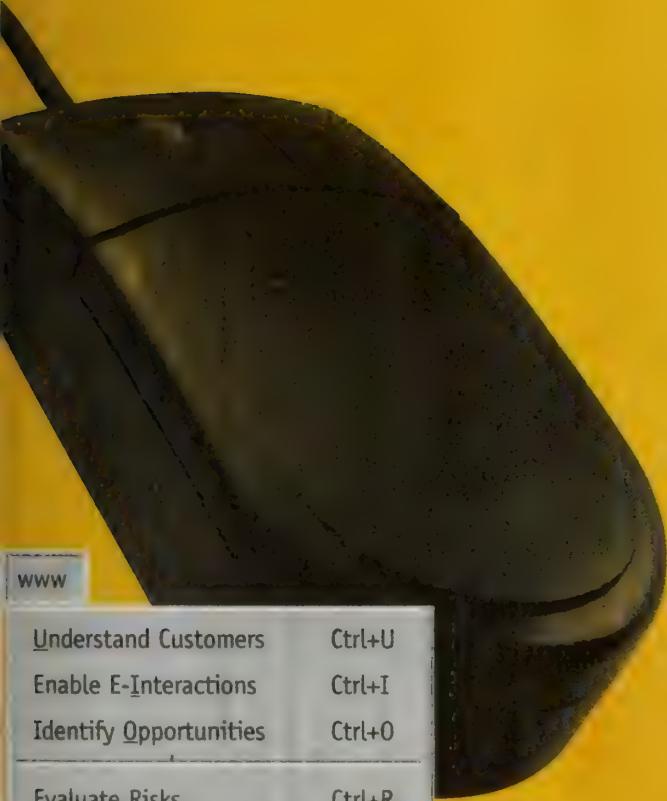
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SHADOW

Five Presidents and the Legacy of Watergate

By Bob Woodward

Simon & Schuster • 592pp • \$27.50

ALL THE PRESIDENTS' SCANDALS

Washington scandal books are a dime a dozen, but when *Washington Post* ace reporter Bob Woodward writes one, genre buffs take notice. Woodward is the Energizer Bunny of investigative journalists, still going strong 25 years after forcing Richard M. Nixon from office with revelations about Watergate. He continues to unearth new examples of abuse with such accuracy and detail that other reporters are left scrambling to catch up.

That's why *Shadow: Five Presidents and the Legacy of Watergate* is a bit disappointing. The book dissects the struggles of five post-Watergate Presidents to cope with a world in which their integrity was under constant challenge. It's all here—the attacks on Gerald R. Ford's pardon of Nixon and on Jimmy Carter's honesty; the Iran-contra investigation that consumed Ronald Reagan's second term and haunted George Bush's Presidency; and of course, Bill Clinton's impeachment, to which half of the book is devoted. There are some tantalizing new details, but for the most part, the book reads like outtakes from a reporter's notebook.

Worse, *Shadow* doesn't offer many clues to Woodward's own thoughts on whether Watergate's legacy has been an overall plus or a debilitating negative for the country. Instead, the author punts, providing only a detached narrative of how Washington's scandal-drenched atmosphere has handcuffed each President. Does he have any regrets over what he unleashed? Has a generation of Woodward wannabes gone overboard? And is it time to return to an era when private lives are off limits?

We are left to assume, from the book's litany of ducking and dodging of the truth by Presidents and their aides, that Woodward thinks the press must not back down. For example, in Woodward's typical fly-on-the-wall fashion, he

narrates the key events surrounding President Ford's pardon of Nixon in September, 1974. Piecing together what he has learned from interviews with more than a dozen participants, he attempts to show that Nixon's lawyers did offer Ford a deal—resignation for pardon. Ford to this day denies he agreed to any quid pro quo.

Woodward reveals how even Jimmy "I'll never lie to you" Carter dissembled. In 1977, Woodward asked for a White House response to a story he was about to report that the CIA for years had been making large payments to Jordan's King Hussein. Carter summoned him to the White House, confirmed the pay-offs, and said that, while he preferred that the story not appear, he couldn't tell the *Post* how to conduct its business. Once the story ran, however, Carter denounced the newspaper and denied to Hill leaders that he had provided the confirmation.

In another reportorial confession, Woodward reveals how Bush violated his oft-stated contention that he would never discuss the advice he gave Reagan. In 1987, then-Vice-President Bush had an aide deliver a top-secret memo to Woodward contradicting Reagan's claim that he was dealing with Iranian "moderates" in trading arms for hostages. The motive: to get the word out that the worldly-wise George Bush didn't buy the implausible line about Iranian moderates.

In an epilogue, Woodward declares there are two lessons of Watergate that Presidents should heed. First, if there's questionable activity, release all the facts early and completely. Second, do not allow any inquiry to harden into a permanent siege. Amazingly, Clinton al-

ways did the opposite on both counts. No President had a harder time learning Watergate's lessons. A first mistake occurred in August, 1994, when Kenneth W. Starr was named Watergate Independent Counsel. Clinton sanctioned a bare-knuckles political attack on Starr—over the objection of then-White House Counsel Lloyd M. Bentsen, who soon departed—and unnecessarily piled the prosecution before it had subpoenaed a single document.

Several of the book's best passages lay bare Clinton's inability to be truthful with himself, his wife, his closest advisers, and even his legal team. When lawyer Robert S. Bennett tried to get Clinton to come clean about his womanizing, Clinton before the now-famous Paula Jones deposition, Clinton's nonresponse was "This is a prison. I purposefully have drapes on the windows." And when asked about his women, he insisted: "I'm retired."

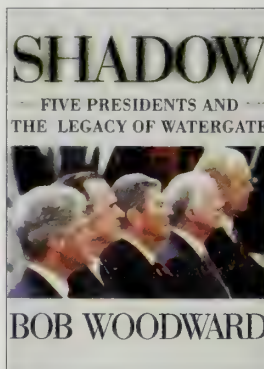
For the most part, Woodward refrains from passing judgment on Watergate's impact. What he does draw Big Conclusions from are that they seem too obvious to be profound. He calls Starr's conduct "pathetic" that Starr ordered to send Congress a massive narrative of the Clinton-Lewinsky sexual liaison. Most Americans drew the same conclusion long ago. Woodward appears to favor extension of the independent counsel law—possibly Watergate's

controversial legacy—yet he castigates independent counsels who take too long to conclude their cases. Woodward is highly critical, for example, of Lawrence E. Walsh's deposition of Reagan in three years after the Gipper had left office and seven years after Iran-contra came to light.

Scandal buffs will find plenty in *Shadow* to hold their attention, while those looking for the father of Watergate to make sense of it all will be disappointed. Still, Presidential candidates should read this book—and consider themselves warned. Those who think the excesses of the Lewinsky affair mean that reporters will disregard politicians' private lives are only fooling themselves.

BY PAULA DWYER

Dwyer has been covering Washington scandals for two decades.



WOODWARD FAILS TO SAY WHETHER WATERGATE'S LEGACY HAS BEEN GOOD OR BAD FOR AMERICA

THE BUSINESS WEEK BEST-SELLER LIST

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Reviews and more are available on AOL (Keyword: BW) or www.businessweek.com (Click on BW Plus!)

HOT TYPE

A BETTER TITLE FOR PACO UNDERHILL'S insightful and amusing *Why We Buy*, No. 6 hardback on this month's best-seller list, would be *Why We Don't Buy*. For the book offers persuasive evidence that retailers could do much more to remove the obstacles facing otherwise eager customers.

One of the many anthropologists now working in business, Underhill assigns trackers to follow or videotape shoppers and note everything they do. That has led to some interesting insights. For example, people hardly notice shopping—circulars, baskets, merchandise—placed just inside a store's door. They need a "transition zone" that will allow them a few seconds to adjust to being inside. Women

shopping with female companions will spend more time—and thus more money—than women accompanied by men, who dislike the activity and are "likely at any moment to go off and sit in the car." All shoppers hate "being brushed or touched from behind" and will simply leave if they cannot study merchandise without getting jostled. And "any contact initiated by a store employee increases the likelihood that a shopper will buy something."

Is Underhill's "science of shopping" just another example of a privatized Big Brother watching everything we do? In a way. But whether you are a retailer or just a shopper, you'll find much to ponder in its pages.

BY HARDY GREEN

BY LAURA D'ANDREA TYSON

OPEN THE GATES WIDE TO HIGH-SKILL IMMIGRANTS



RESOURCE:
Foreigners coming to Silicon Valley have helped create jobs and wealth, providing talent, capital, and links with global markets

Laura D'Andrea Tyson is dean of the Haas School of Business at the University of California at Berkeley and was President Clinton's chief economic adviser.

As the amazing expansion of the 1990s roars along, labor-market conditions continue to tighten throughout the country. The unemployment rate has been below 4.5% since November of last year, and nearly one-half of all Americans live in areas with unemployment rates below 4%. According to the Federal Reserve's most recent Beige Book, limits on labor supply are now impeding employment and output growth in an increasing number of sectors and regions.

Nowhere have labor-market conditions been tighter than in the information-technology sector. Since 1993, this sector has added more than 1 million net new jobs with wages that are on average about three-quarters higher than the rest of the economy. The unemployment rates for information-technology workers, including electrical engineers, computer scientists, and programmers, are below 2%, forcing regional employers to mount national searches to fill open positions.

In part, the strong demand for information-technology workers reflects the economy's overall strength. Efforts to head off Y2K problems have also intensified the search for such workers this year. But it's a mistake to conclude that the increase in demand for computer scientists, systems analysts, and computer programmers is temporary. Spending on information technologies has risen steadily since 1992 and now accounts for more than half of total business spending on producer-durable equipment. New information technologies are changing business operations from supply-chain management to human-resource management to marketing strategies. According to a recent Commerce Dept. report, the nation will require at least 1.3 million new information-technology workers over the next decade to create new systems. More will be needed to operate them.

BIG JUMP. As a result of the intense scramble to hire information-technology workers, the number of H-1B visas for skilled foreign workers available for this year has already been used up. This is less than one year after passage of legislation nearly doubling that number to 115,000. The Clinton Administration initially opposed an increase in the number of H-1B visas because of concerns about possible negative effects on American workers through immigration.

But a recent study by Professor Annalee Saxenian at the University of California at

Berkeley for the Public Policy Institute of California indicates that immigration of information-technology workers has a positive economic impact. Drawing on a detailed analysis of Silicon Valley's experience over the past 20 years, Saxenian demonstrates that such immigrants have been a major source of new job and wealth creation, bringing creativity, capital, and links with global markets to the region.

Today, immigrants account for at least one-third of the scientific and engineering workforce in the Valley and occupy senior executive positions in at least one-quarter of new technology companies. Many have advanced degrees in computer science and engineering, fields in which the number of degrees granted by U.S. universities to American students has been declining. **LIFT THAT CAP.** Over time, employment opportunities in information technology will stimulate more American students to acquire the necessary skills. They will be helped by the numerous educational initiatives of the federal Administration, including programs to improve grade basic skills in math, science, and reading in primary and secondary schools; to increase college enrollment and retention; and to provide retraining. State and local governments are responding to the demands of the new economy, often working with private companies to develop youth apprenticeship programs and specialized community-college training options. Numerous companies in the information-technology sector, such as Cisco Systems Inc. and Autodesk Inc., have introduced their own programs to attract and train students for information technology jobs.

For many programming jobs, the necessary skills can be acquired in a matter of months. For others, however, the gestation period for skills lasts years and requires substantial improvements in math and science education even before college. In the meantime, immigrants who possess the required skills should be allowed—indeed encouraged—to fill the gap. Conditions in the information technology sector indicate that it's time to raise the cap on H-1B visas yet again to provide room for further increases as warranted. Silicon Valley's experience reveals that the results will be more jobs and higher incomes for both American and immigrant workers.

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E X T R I C I T Y
S O F T W A R E

SETTING THE AGENDA IN BUSINESS-TO-BUSINESS INTEGRATION.

BY GENE KORETZ

STILL HOOKED ON THE EVIL WEED

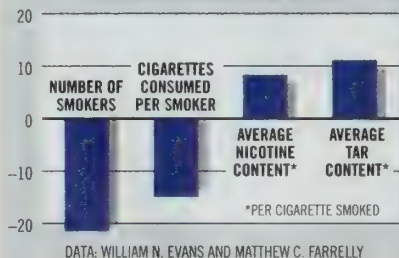
How smokers react to rising prices

Theoretically, the tobacco industry's huge \$246 billion settlements with the states over medical costs associated with smoking will benefit Americans not only by taking pressure off taxpayers but also by improving their future health. That's because cigarette demand is sensitive to price changes, and the settlements have sparked some of the largest tobacco price rises in history.

In the past 17 months, average cigarette prices in the U.S. have jumped 40%. Since studies indicate that a 10% price rise tends to induce a 3% to 5%

THE MIXED EFFECTS OF CIGARETTE PRICE HIKES

PERCENT CHANGE IN RESPONSE TO A 100% RISE IN THE COST OF A PACK



reduction in per capita consumption of cigarettes, the potential health benefits of the latest round of price increases appear to be substantial.

Unfortunately, they're less substantial than they seem, argue William N. Evans of the University of Maryland and Matthew C. Farrelly of the Research Triangle Institute. Medical research shows that people given cigarettes with lower tar and nicotine content often change their smoking behavior to maintain their intake—by puffing more often or inhaling more deeply. Writing in the *Rand Journal of Economics*, the two economists provide evidence that smokers also adjust their buying patterns to compensate for price increases.

Analyzing detailed survey data covering some 22,000 people from 1979 to 1987, they find that smokers in high-tax states tend to buy fewer cigarettes, but to smoke ones that are longer and higher in tar and nicotine than those purchased by smokers in low-tax states. And smokers in states that have raised

taxes significantly also tend, over time, to switch to more powerful smokes.

To be sure, roughly half of the drop in demand caused by price hikes can be attributed to the fraction of the population who quit smoking. But Evans' and Farrelly's point is that the behavior of those who continue to smoke negates a significant part of the health benefits generated by getting people to stop.

Since tax hikes affect all brands of smokes, it's predictable that many smokers would switch to stronger brands while economizing by smoking fewer cigarettes. Indeed, the study indicates that the average daily tar intake of those who keep on smoking remains roughly the same after they cut down.

Among young adults age 18 to 24, however, the researchers find that the tendency to switch to stronger smokes is so pronounced that their average tar and nicotine intake actually rises. And since young smokers are also those most likely to quit as a result of higher prices, this finding is particularly troubling. It suggests that the future health problems of young continuing smokers could offset as much as half of the health gains anticipated for those in their age group who are induced to quit.

If governments really want to use taxes to improve health and deter smoking, conclude Evans and Farrelly, they should tie tax rates directly to the tar content of cigarettes.

COLOR-BLIND AT THE BALLPARK

Over time, fans have lost their bias

Prejudice against blacks may still taint the attitudes of some white Americans, but it's no longer apparent in major league ballparks, report F. Andrew Hanssen of Montana State University and Torben Andersen of Red Deer College in Red Deer, Alta., Canada. In a study in the current issue of *Economic Inquiry*, they assess the changing degree of bias against black and Latino ballplayers in the annual voting for baseball's All-Star Game.

Since 1970, the starting lineups for each major league in the big game each year have been decided by the votes of fans, mainly at ballparks. At the same time, the percentages of blacks and Latinos among the candidates (the starting lineups of all teams in both leagues) have remained relatively stable, averaging about 27% and 17%, respectively.

Thus, by controlling for performance,

experience, position, and other factors, the two economists were able to estimate how much of an impact racial and Latin ethnicity had on the voting. Analyzing data from 1970 to 1996, they found no systematic bias affecting the voting for Latino players. Voting for blacks, however, tells a more intriguing story.

In 1970, the study indicates that black candidates received 40% fewer votes than white ballplayers with similar records. But by 1975, the difference had shrunk to only 17%, and by the early 1980s, the evidence of anti-black bias in the voting had disappeared entirely. Indeed, by 1996, black ballplayers even appeared to have an edge over their white peers.

"The results," says Hanssen, "are especially striking in light of the fact that black attendance at ball games is only quite small but seems to have declined over the period."

FED POLICY'S ACHILLES' HEEL

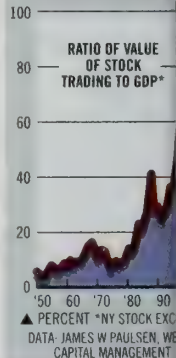
Will restraint hit stocks or growth?

From 1950 to 1980, the ratio of the annual value of stock market transactions to gross domestic product was relatively stable, averaging about 100%. But in recent decades, it has zoomed—exceeding 100% by early this year.

Most economists see this as evidence that stocks are overvalued. But James W. Paulsen of Wells Capital Management is worried about what it implies for monetary policy. He notes that the ratio began to climb in the 1980s, just as the link between the growth of the money supply and economic growth came highly unpredictable.

Paulsen thinks monetary growth increasingly tended to fuel spending on financial assets—i.e., the stock market—rather than to stimulate real economic activity. And to him, that implies that Fed tightening is far more likely to cause a market correction than to brake the economy over the near term. "It may be one reason," he says, "that Alan Greenspan has recently been musing about past stock market bubbles that burst."

WALL STREET'S BIG LEAP SKYWARD





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BY STEPHEN H. WILDSTROM

GIVE US A SIMPLER 'OFFICE'

But Microsoft is far from ready to produce such a product, despite the demand

Do people want a simplified version of Microsoft Office? I put that question to readers a couple of weeks ago, and their response was a resounding "yes." They complained that Office is too complicated, too big, too crash-prone, too expensive, and needs too much computer power. People offered suggestions on how to fix it.

Patrick McKeon of Chicago has a typical reaction. "You bet I would buy a simplified version of Microsoft Office if it was available," he says. "I have longed for this for years. I don't use 80% of the programs' features."

FRUSTRATION. Despite the outpouring of sentiment, in which about 99% of correspondents favored a simplified Office for home, school, or small business, Microsoft shows little interest in rising to the challenge. And as long as Microsoft controls the proprietary file formats that Office applications use, it is unlikely that anyone else could produce a truly compatible product, a fundamental requirement of Office Lite fans.

The sources of frustration were many, but a few dominated the complaints. "Instead of a lot of new stuff, I would prefer that the old stuff would work properly," says Herbert Francel of

Banyoles, Spain. He's bothered by dates that change when moving from one version of Excel to another. Many complained that features designed to promote ease of use, such as wizards and automatic formatting, actually made their work harder. And Brock B. Bernstein of Ojai, Calif., speaks for

wants to go back to a simpler edition of Word—but needs the ability to display data from Excel spreadsheets in Word documents. M. Al-Rawahi of Muscat, Oman, uses only limited features but needs multi-language support. And there were many calls for one feature to be added to Word: a command, long present in the WordPerfect word processor of Corel WordPerfect Office, that makes all formatting codes visible.

Interestingly, readers also came up with a way to create customized simplified applications. They would have Microsoft—or a competitor—sell a bare-bones version of Office. Customers could add additional features by either buying or renting components as needed, perhaps by downloading them off the Internet.

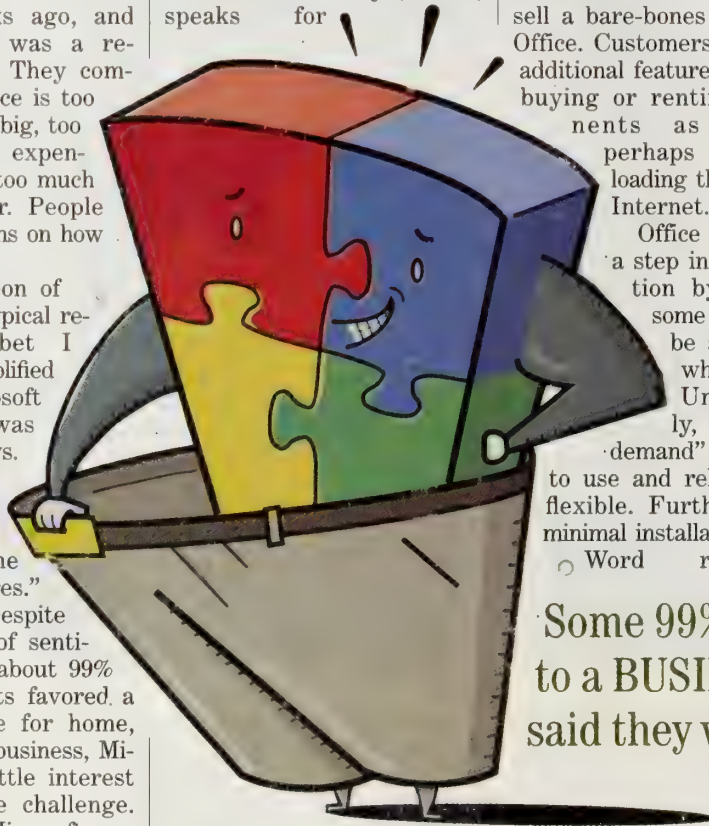
Office 2000 takes a step in this direction by allowing some features to be added only when needed. Unfortunately, "install on demand" is difficult to use and relatively inflexible. Furthermore, a minimal installation of just Word runs 89

form of the "pocket" applications built into CE handheld computers which have the advantage of working with existing file formats.

Writes Perry Glas Haverhill, Mass.: "It is to me now that the trimmed down version of an application suite that works for Microsoft's CE. The only dumb component is PowerPoint, a read-only application and therefore useless for work. But for trimmed versions of Word, it's terrific. Microsoft exec says the company's experience has that CE users want the desktop applications to be more and more like desktop big brothers.

LOST FEATURES. One suggestion offered by several readers is that software publishers move toward industry-standard file formats. This would make it easier for other companies to offer office-compatible software. Office 2000 moves in the direction by letting users choose hypertext markup language (HTML), the lingua franca of the Web, as an alternative to standard file formats. But many format features are lost when a file is saved as HTML.

Judging by the volume



Some 99% of those who responded to a BUSINESS WEEK question said they wanted software suitable for home and school

many when he says: "The overall complexity of Office and Windows creates compatibility problems that lead to lockups and crashes."

To some extent, readers' responses support Microsoft's contention that while few people use more than a tiny percentage of the programs' features, everyone wants a different 10%. For example, Janet Galvez of the University of Florida in Gainesville

megabytes and lacks such basic functions as spell-checking. But a senior Microsoft executive, who declined to be quoted, said a highly modular Office posed daunting engineering challenges, could suffer from poor integration of its components, and might also make it difficult for users to discover extended features.

An alternative path to a simpler Office might already be in Microsoft's stable in the

tone of the mail I received there is a market for a simpler alternative to Office. Microsoft's lack of interest and the realities of the marketplace mean it will likely be a long time in coming.

BusinessWeek *ONLINE*

A sampling of readers' responses is available with July 5 issue at www.businessweek.com

MES C. COOPER & KATHLEEN MADIGAN

THE GOOD NEWS: EXPORTS ARE UP. THE BAD NEWS: EXPORTS ARE UP

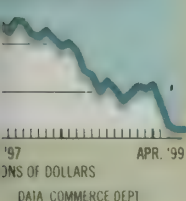
Stronger foreign demand may put pressure on U.S. prices and wages

U.S. ECONOMY With Federal Reserve Board Chairman Alan Greenspan evaluating the economic news recently, you might have missed an interesting development in the April report on foreign trade: Exports posted their first increase in six months. It's a clear sign that after nearly three years in dire straits, economies outside the U.S. are getting back on their feet. And it's not just the financial markets that are stronger. Foreigners are starting to buy more goods and services.

However, rising foreign demand is not all good news for the U.S. In fact, it plays right into Greenspan's concerns about red-hot domestic demand. Sagging exports and a widening trade deficit have been a safety valve for the U.S. economy. They have offset some of the problems of U.S. spending by consumers and businesses, preventing the extra price and labor-market pressures that such demand would otherwise have created.

TRADE DEFICIT: STEADY IN APRIL, BUT GAPING

GOODS AND SERVICES



Consider that, although domestic demand grew 5.7% over the past year, the fastest yearly clip since 1984, the economy has grown at a slower 3.9% pace. That's because the wider trade gap subtracted from overall growth, and the softness in exports depressed manufacturing, helping to slow inventory growth. The problem is that, based on June 17 testimony before Congress, Greenspan estimates that the economy's maximum noninflationary growth is currently about 3%. If the drag from trade is increasing, then that puts increasing pressure on domestic spending to slow down. If it doesn't, then a half-percentage point rate hike by the Fed—now almost universally expected on June 30—may not be the last.

BE SURE, FOREIGN TRADE was a continuing source of growth in the second quarter, but stronger foreign demand means that the drag will lessen. The widening trade deficit, including goods and services, held steady at March's gap of \$18.9 billion, only a bit wider than February's \$18.5 billion deficit (chart).

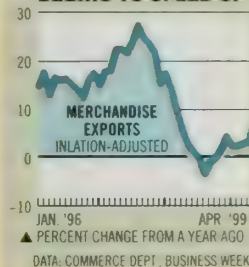
Adjusted for inflation, the April merchandise deficit was much larger than the first-quarter average, suggesting that the widening trade gap is likely to cut more than a percentage point from second-quarter

economic growth. Still, that would be less than the 2.4 points it subtracted in the first quarter, and the drag in the second half should diminish further.

The 1.2% increase in April exports was broad, including gains in shipments of autos, consumer goods, capital goods, and raw materials. Adjusted for inflation, overall merchandise exports advanced a solid 2.9% in April, and they have grown 7.8% from a year ago, the fastest annual growth rate in more than a year (chart).

It should not be surprising that the export turnaround coincides with the recent gain in manufacturing output. Excluding autos, to eliminate the effects of last year's strike at General Motors Corp., factory output in the second quarter is growing at the fastest quarterly pace in a year and a half.

EXPORT GROWTH BEGINS TO SPEED UP



MOST IMPORTANT, EXPORTS to all Pacific Rim countries are up 2% from a year ago. Last summer, Pacific Rim exports were 20% below their year-earlier level. Stronger growth in Korea, along with nascent recoveries in nearly all the Southeast Asian countries, all buoyed by continued solid growth in China, are lifting demand for U.S. goods. Most analysts believe that the surprisingly robust first-quarter growth reported by Japan was a statistical fluke and, while not signaling a recovery, it may mean the worst is past.

The only real problem area for U.S. exports right now is Latin America, where the lagged effects of Asian contagion are playing out. U.S. shipments to Mexico are about flat from a year ago, but exports to the rest of Latin America are still down a steep 15% from this time last year, mainly reflecting recessions in Brazil, Argentina, and Chile.

Exports to Europe in April rose 8.5% from a year ago, a pickup from the annual pace in recent months. Stronger growth in Europe will boost U.S. shipments in coming months, especially since all of Western Europe accounts for 25% of U.S. merchandise exports. The preliminary report on euro zone gross domestic product showed growth at a sluggish annual rate of 1.6%, yet the showing was a bit better than expected. Moreover, based on GDP data, especially in Germany, first-quarter domestic demand in Europe rose strongly,

while overall growth was dragged down by foreign trade and inventory liquidation.

Looking to the second half in the euro zone, the drag from trade will ease, and with inventories exceptionally lean, some restocking will boost production. Also, domestic demand should keep picking up, given recent gains in measures of consumer and business confidence. New strength in German manufacturing orders and industrial production reflect the general trend of euro zone improvement, which is bolstered by low interest rates and a favorable exchange rate.

THE TROUBLE WITH U. S. TRADE will continue to be on the import side of the ledger. Despite the strong export showing in April, imports rose by just as much, reflecting booming U.S. demand and a strong dollar. Higher oil prices inflated the value of April imports, but even adjusted for inflation, spending on foreign goods increased sharply.

Without some cooling in U.S. demand, import growth will not slow anytime soon. Greenspan noted especially the impact on demand growth from wealth gains arising from stock values and home prices, saying that increased wealth had accounted for about 1% of the economy's 4% growth rate. He also said that even if the rapid growth in capital gains ends soon, there is still enough such stimulus in the pipeline to support outsized demand growth for months to come.

Reflecting ever-rising imports, which now account for about a third of all nonoil goods purchased in the U.S., protectionist pressures have surfaced this year. Most recently, on June 22, the Senate by a vote of 61-38 defeated a bill, passed by the House of Representatives, that would have slapped quotas on imports of steel—an act contrary to international trade standards.

In addition to seemingly irrepressible U.S. demand, a strong dollar will continue to draw in foreign goods. After plunging 11% from last August to mid-January, following last fall's market turmoil and Fed rate cuts, the trade-weighted greenback has regained 7% of that drop (chart). If the Fed makes more than one hike in U.S. interest rates, further dollar strength is likely, since the rest of the world will not be in a position to match any increase anytime soon.

The problem is that, despite the faster growth in exports in the months to come, ever-rising imports will prevent any significant improvement in the trade balance this year. But the drag will lessen, and that will provide a smaller safety valve for pressures on U.S. wages.



SPAIN

GROWTH HAS JOBLESSNESS ON THE RUN

As the euro zone's heavyweights struggle to create jobs, Spain has become a growth leader in employment and overall economic performance. After 4% in 1998, the economy grew 3.6% in the first quarter of 1999. That is twice the pace of the 11-nation euro zone, and it puts the government's target of 3.8% for the year within reach (chart).

Strong growth will allow further progress in reducing the euro zone's highest jobless rate. Spain's unemployment rate fell from 18.17% in the fourth quarter to 16.97% in the first, the lowest in seven years. The drop was helped by new recordkeeping that is closer to euro zone standards. Also, Spain

has a lot of employees who want to work more hours. Still, the fall was the twelfth in a row, and the economy has already added 161,000 jobs this year, half of the 1999 government projection. In

A NOTCH SLOWER, BUT STILL STRONG



1998, Spain generated half of the job growth in the 15-country European Union.

Job growth has been spurred by record low interest rates, a result of cuts from high levels to assure euro zone convergence. Low rates are fueling domestic

demand, especially consumer spending and construction. Business investment is also gaining.

Still, global weakness is depressing exports, and that's why job growth is expected to slow a

bit in the second half. Even as construction, agriculture, and services, especially tourism, post solid growth, manufacturing jobs fell in the first quarter, and growth in April industrial production slowed to only 1.2% from a year ago, as Asian weakness has spread to Latin American and European export markets. Another record year for tourism is helping to offset some of the export weakness in the foreign-trade accounts.

Strong growth is generating mild concern about the pickup in inflation to 2.2% in May, above the 2% target set by the European Central Bank for euro zone countries. The zone average is 1%. The government plans to cut prices in regulated utilities, likely to be followed by efforts to reform pricing in retail distribution and certain services.

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WHOSE CABLES ARE THEY?

Court rulings on Internet access have set off a storm of debate

It's hard to imagine that a public policy debate over the highly technical question of Internet access over cable could generate so much political mudslinging. In Los Angeles, three out of five commissioners on a city advisory group have resigned since the beginning of June, in protest over Mayor Richard J. Riordan's refusal to force the cable companies to allow Internet service providers to use their networks. One commissioner, Robert Duggan, accused the mayor of selling out consumers in favor of the cable industry. And State Senator Richard Alarcón, the California Senate Majority Whip, is expected to introduce legislation to open cable wires to Internet companies statewide.

What's all the fuss about? From Los Angeles to Ft. Lauderdale, local officials are beginning a hot debate on something called "open access." At issue is whether AT&T and other cable companies that are upgrading their systems to provide high-speed Internet access are obliged to open their networks to competitors such as America Online Inc. Although there are alternatives—beefed-up phone lines and satellites—cable is quickly shaping up as the

most popular way to deliver zippy Net connections to U.S. households. That means whoever gets to sell cable Internet service will benefit—as the market for Net access swells to a projected \$35 billion by 2002, up from \$14 billion today, and as electronic commerce booms. "No one can match the cable industry for speed and ease of use," says Spencer Grimes, cable analyst at Salomon Smith Barney.

For a while, it looked as if AT&T and other cable players wouldn't have to share. Since the long-distance giant cut deals to acquire Tele-Communications Inc. and MediaOne Group for a combined

\$116 billion, most cities have transferred the cable licenses to AT&T without conditions. The Federal Communications Commission, eager for consumers to get local phone competition and high-speed net access, also gave its blessing. Then came Portland, Ore. Earlier this year, its city and county officials decided to force AT&T to open up the TCI cable network it was buying to any other Internet player that wanted the use of the pipes. AT&T challenged the dictate but lost a federal court decision on June 4. AT&T is appealing that ruling. **"PRAIRIE FIRES."** Portland was just the first of a growing firestorm. In Florida, Miami-Dade County and Broward County, which includes Ft. Lauderdale, are debating the open-access issue and are expected to vote on it in July. Seattle, San Francisco, and Oakland, Calif., are also weighing the issue. All told, as many as 200 municipalities could consider the open-access question in the next year. There seem to be "prairie fires across the country," says George Vradenburg III, senior vice-president at AOL.

SAN FRANCISCO

The San Francisco Board of Supervisors will meet July 6 to consider whether AT&T should open its lines to ISPs when it takes control of the city's cable system. Affected: 460,000

THE FIGHT OVER OPEN ACCESS GOES LOCAL

PORTLAND, ORE.

A federal judge ruled the city can force AT&T to open lines to Internet service providers. Now under appeal. Subscribers affected: 263,000



The result is a massive lobbying battle. In the high-profile Los Angeles conflict, C. Michael Armstrong, AT&T's chairman and CEO, visited Riordan to press his case against open access. The company is hiring lobbyists in nearly every

LOS ANGELES

The city council and the Mayor appear to be at odds over open access policy. Three of five members of a city advisory group quit in protest of a report opposing open access.

Affected: 640,000

region where the issue is hot. Among the lobbying outfits on board in L.A. is one headed by former Democratic strategist and John F. Kennedy staffer Joseph R. Cerrell.

On the other side, AOL has hired the high-powered law firm of Latham

& Watkins and GTE is using former Democratic National Committee Chairman Charles Mannatt's law firm, Mannatt, Phelps & Phillips. AOL wants to be able to buy capacity on AT&T's cable pipes at wholesale prices and then resell it to consumers, bundled with AOL's content, at a higher price. "It's very important that consumers have choices and competition be allowed to flourish," says AOL CEO Steve M. Case.

AT&T executives seethe at such comments. The company points out that it spent more than \$100 billion to buy cable networks across the country, and it must invest bil-

FORT LAUDERDALE

A Broward County commission is debating whether AT&T's MediaOne must open its cable wires to ISPs.

Affected: 262,900

lions more to enable the cable systems to handle services like Net access and telephone calls. The company says it shouldn't have to share its hard-won network with other companies. "People can go to any Web site they want," says AT&T General Counsel James W. Cicconi. "What AOL really wants is the ability to control the customer. They want to maintain their dominance."

MOMENTUM. Cable players also downplay the idea that they have any monopoly control over Net access. Only about 800,000 people tap the Net over cable modems, or less than 1% of total Net users. Although that number will grow, the number of alternatives are increasing daily, cable companies argue. Indeed, AOL has already struck deals with Bell Atlantic Corp. and SBC Communications to sell its Net service over high-speed phone lines. And on June



21, AOL announced that it would invest \$1.5 billion in Hughes Electronics Corp. so AOL customers could reach the Net from high-speed satellite connections. "I think AOL's investment undercuts the notion that there won't be true competition for broadband Internet access and undercuts the need for government involvement," says Brian L. Roberts, president of Comcast Corp., the country's third-largest cable company.

For now, though, AOL and other open-access advocates appear to be gaining momentum. Several municipalities are following Portland's lead. Miami-Dade and Broward Counties seem to be leaning toward opening up the cable plant. And the Los Angeles city council, which early on voiced support for open access,

will now probably oppose Riordan's stance against open access, sources say. Spokane (Wash.) is headed for a fight on the issues as well. "I'm looking to take a more critical and aggressive stance on these issues," says Jay Cousins, who sits on the Spokane board advising the city and county on cable regulation. "The city, when it comes to any company like TCI, is about as obsequious as it gets."

In the long term, however, AT&T and other players are hoping to turn the tide. The long-distance giant expects to win its appeal of the Portland court case. If that happens, it's likely to set a strong precedent that AT&T has no legal obligation to share its cable network and can do so at commercial rates it negotiates with AOL and others.

AT&T also has a safety net. Although AT&T is fighting open access in its home municipality now, the FCC has made it clear that it thinks there needs to be a consistent national policy on this issue. And FCC Commissioner William Kennard has said that he is opposed to mandating open access because he believes it would hurt AT&T and other cable players by removing every incentive to upgrade their networks. "My No. 1 concern, number one, is we've got to get Americans online," he says. With friends like Kennard, AT&T can afford a few enemies in Los Angeles and Portland.

*By Peter Elstrom in New York
Ronald Grover in Los Angeles
Catherine Yang in Washington*

THE ABCs OF OPEN ACCESS

High-speed Internet access, also known as broadband, is the Holy Grail of the high-tech industry. But as cable operators upgrade their systems for super-fast Internet communications, a battle has erupted, with the cable industry and AT&T on one side and with Internet service providers (ISPs) such as America Online Inc. and local telephone companies, including the Baby Bells and GTE Corp., on the other. The issue: Should big cable operators be obligated to let their rivals use their networks?

What is the fight between AT&T and the Internet service providers about? AT&T and the cable companies own the cable pipe going into people's homes. The question is whether they are obliged to let others such as America Online use that fast pipe to deliver their services. Currently, customers of AT&T's cable service pay about \$40 a month for a speedy Internet link bundled with the online service At Home, which AT&T controls. To get content from other online companies, such as America Online, At Home subscribers have to pay an extra fee—\$9.95 a month in the case of AOL.

AOL and other Internet service providers would like to be allowed to lease space on AT&T's cable line at a wholesale rate. That way, they could sell Internet access and content directly to customers. AT&T says it will negotiate but that it doesn't want to

be forced to do it.

Do consumers have an alternative to the cable companies to get high-speed Internet access? They can get high-speed Web access from such competitors as phone companies or satellite broadcasters. Both are rolling out technologies to offer fast Web connections—and customers can pick their own Internet provider. But cable today is typically faster than beefed-up phone lines and easier than satellite access. So, for now at least, it is proving more popular.

Why are the cable companies against the idea of opening up their networks to competitors?

Cable operators have spent \$36 billion to upgrade their systems for such services as zippy Internet traffic. They say that's all private investment and that they shouldn't be forced to sell capacity on that network at cheap rates. AOL and other ISPs say they would pay a fair price to lease part of the cable system.

Is it technically feasible for cable operators to offer consumers a choice of Internet providers?



AT&T and others say they don't have the technology to chop up their network and sell the pieces to thousands of competitors. Phone company GTE Corp., however, says it has the technology that would allow AT&T to share its network.

If subscribers to AT&T's cable service also get their phone service via AT&T's cable system, why couldn't they just up their old Internet provider by phone?

They could. But the phone service AT&T offers through its cable system won't travel at the high speeds that its Net service does. So consumers may not get their ISP much faster.

Will the federal government mandate open access?

For now, the Federal Communications Commission is opposed to forcing cable companies to share their networks. The agency fears any regulation at the early stages of the budding broadband market may scare away investment dollars needed to develop cable's high-speed Internet capabilities.

By Catherine Yang in Washington

By Peter Coy

MAKING SENSE OF THE SWIRL FACING THE FED

These days, Federal Reserve Chairman Alan Greenspan is like a bus driver on an unfamiliar route. At every intersection, the passengers loudly debate whether he should turn left, turn right, or go straight. He thinks he knows the way, but his map is sketchy.

Unfortunately for the Fed chairman, there is no landmark, no simple signpost that will lead him unerringly to the right course. There are only clues. To his credit, Greenspan considers all of them, even those that defy conventional wisdom. For instance, theory says inflation accelerates when unemployment shrinks, but for months Greenspan has heeded data showing little inflation and resisted slamming on the brakes. Now, though, Greenspan is signaling that the Federal Open Market Committee will raise short-term interest rates at its next meeting on June 30, and many investors worry that more hikes may be in the making. No one knows exactly what's swirling through the minds of the nation's chief central banker and his colleagues on the FOMC. But here are some of the factors they are now debating:

The first factor, of course, is inflation. In congressional testimony on June 17, Greenspan criticized the consumer price index and said he favors another measure of inflation, the price index used in calculating personal consumption expenditures in quarterly gross domestic product reports. The PCE measure of inflation is usually lower because it captures consumers' ability to substitute less-expensive alternatives in response to price increases. But neither measure is pointing to rising prices. In the last quarter, the PCE index rose at an annual rate of 1%, vs. 1.7% for the CPI.

Greenspan also has given short shrift to money-supply growth of late because it has been a poor predictor of inflation in recent years. But some economists blame that on problems in the banking system. Now that banks are healthy, says Salomon Smith Barney economist Robert V. Clemente, the money supply is once again a valid indicator. He notes the past year's 7% growth in the monetary aggregate known as

M2—cash, checking, and money-market accounts—presages a jump in consumer prices.

■ One way excess money growth could show up is in reckless lending by banks and inflation of financial-asset prices. Greenspan does worry about speculation in the stock and bond markets but says he won't raise interest rates just to keep specula-

Greenspan called it "a reflection of a global reduction in the long-term inflation outlook."

■ Traditionally, industrial capacity utilization is one of the best early warning signs of inflation. By that measure as well, there's nothing to worry about: It's hovering around 80%, which is not far above recession levels.

■ The unemployment rate is a different matter. At just 4.2% in May, it's far below the level at which most economists would expect inflationary overheating. One explanation for why wages haven't surged is that employers have hired people who had not been actively looking for jobs. So lately, Greenspan has focused on an alternative measure: the pool of available labor, which includes both the unemployed and those who are not in the labor force but might like to work. According to Stone & McCarthy Research Associates in Princeton, N.J., that pool in May was the smallest it has been for that month since the 1970s.

■ Anecdotal evidence may not impress statisticians, but Greenspan & Co. take it seriously. The Fed's June 16 summary of regional economic conditions, known as the Beige Book, mentioned a temporary-help agency that was offering administrative workers in the Midwest a 25% pay raise since the start of the year. More disturbing: The agency was passing on the higher costs to customers.

Add it all up—and throw in dozens of other data ranging from overseas growth rates to consumer spending to unit labor costs—and you have one very mixed picture of the outlook for inflation. In such circumstances, it would be wise for the Fed to move slowly. If inflation does creep up, it will be easy enough to beat back down. But if the Fed raises rates too much or too soon, it could kill the nascent global economic recovery. Of course, everyone's got an opinion. But only one matters—the one held by the man driving the bus.

With Laura Cohn in Washington



Given the mixed picture for inflation, it would be wise for the Fed to move slowly

tive bubbles from forming. Why? Because, he says, there's no way to out-guess the market. In any case, no alarms are sounding. Stocks have gone sideways of late, and bond prices are well off their highs.

■ Gold prices usually rise when inflation threatens to erode the dollar's value. Instead, they have plummeted by one-third in the past five years, to their lowest level since 1979. In his congressional testimony on June 17,



AUTOS

A DIFFERENT KIND OF SATURN

Can larger models—and more GM features—revive the brand?

Marletta Stevenson is awaiting the delivery of a car she has never seen. She doesn't even know the sticker price. In April, the retired Bay Shore (N.Y.) teacher plunked down a \$500 deposit for a gold Saturn LW wagon. She's hoping the new midsize car that arrives in showrooms in early July will provide more room than her old Saturn SW for toting her model railroads to conventions. "Pure Saturn love is what I'm buying this car on," she says. "I'm buying it on faith."

As it launches the first addition in nine years to its one-car lineup, that's the kind of devotion Saturn is banking on. Once the bright, young upstart of General Motors Corp.'s dysfunctional family, Saturn set out to be all that GM wasn't: customer-sensitive, labor-friendly, and service-oriented. But as gas prices plunged, Americans abandoned small cars. And lacking the investment from GM to bring out new models, Saturn was stymied, its sales sliding 19% since 1995. Even within its niche, Saturn lost ground to foreign rivals Toyota and Honda, despite the U.S. auto maker's sterling customer reputation.

MAKE OR BREAK. Now, Saturn hopes the new bigger LS sedan, which starts at \$15,500, and the \$19,300 LW wagon will pull the division out of its free fall, doubling sales, to nearly 500,000 cars, in a few years. "This is make-it-or-break-it time," says Amityville (N.Y.) Saturn dealer Michael Lazarus. "Saturn

proves itself as a brand with this car."

Fortunately for Lazarus and Saturn's 403 other hard-pressed "retail partners," as Saturn calls them, the new L-series (for Larger Saturn) is reckoned a worthy competitor to the top-selling—and similarly priced—Toyota Camry and Honda Accord. The bland styling of the LS "makes a statement of attractive practicality," aimed at the buyers of Japanese sedans, says Lincoln Merrihew of Standard & Poor's DRI. And the motor press says the car's European-derived chassis performs. Says Csaba Csere, editor of *Car and Driver*: "The new Saturn sedan is definitely in the ballpark with the leaders in the class."

Even better news for Saturn was the GM board's May approval of a new Saturn sport-utility vehicle. That will get the division into the industry's hottest segment by 2001. Critics carp that GM should have moved Saturn straight into the fast-growing truck market, instead

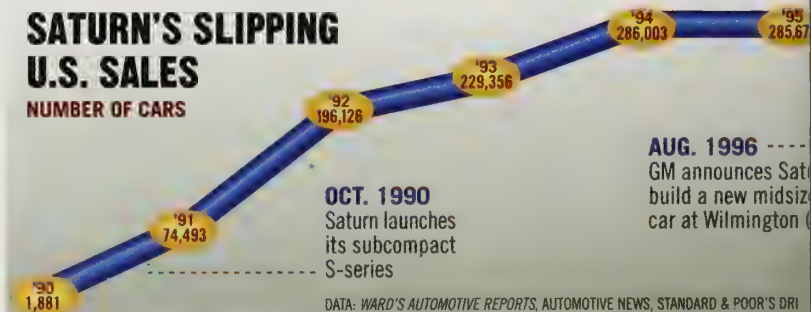
of the family-sedan segment. But Saturn President Cynthia Trudell says as many Saturn customers were coming to midsize cars and that the division's 3.5 million buyers were a sustainable lure. In any case, Saturn vehicles are "late but certainly not late" to revive the moribund midsize sedan, says Merrihew. Admits GM North America President Ronald L. Zarrella: "I wish we had done it a long time ago."

So do Saturn customers and investors. For years, GM refused to grant Saturn the autonomy it needed to flourish, stubbornly diverting resources to other brands such as Oldsmobile instead. It pulled a rabbit out of the hat in 1990 when Arthur D. Little consultant Richard Wolkonowicz. "Then they almost died because of interdivisional fighting," says Zarrella. **STRINGS.** The GM brass lined up Saturn because of its track record in luring import-loving baby boomers. The division says it recruits 75% of its customers from non-GM car owners. Zarrella, "because we think it will attract new consumers to General Motors and increase our market share."

But although Saturn now is a success, the new models it desperately needs there are strings attached. The realities of global auto consolidation are prevailing over the plucky independence that made Saturn a maverick. GM can no longer afford to let Saturn engineer, and manufacture, cars from scratch, as it did in the

SATURN'S SLIPPING U.S. SALES

NUMBER OF CARS



DATA: WARD'S AUTOMOTIVE REPORTS, AUTOMOTIVE NEWS, STANDARD & POOR'S DRI

15,500: a decade ago when the upstart division was created. Saturn vehicles must now share underpinnings and many components with GM brands. Says Trudell: "Saturn needs to grow by tapping the resources of our parent."

That's why Saturn's new cars are built by GM workers in an ex-Chevrolet factory in Wilmington, Del., not by the hand-picked Saturn at the company's plant in Spring Hill, Tenn., mythologized by a decade of Saturn ads. Says ING Baring analyst Maryann Keller: "Saturn is in danger of becoming just another car division of General Motors." **ITTED.** That could be a problem for a carmaker that has billed itself as a different kind of car company." Wesley R. Brown, an analyst at the end consultants in Thousand Oaks, "One reason Saturn became popular was that they said they were different from the rest of GM."

managers insist they are committed to preserving Saturn's uniqueness. "There are certain elements of the Saturn character that are not negotiable," he insists. Those boil down to no price-cutting, friendly sales and service, and the popular dent-resistant plastic panels on the sides of all Saturns. "The new car's comfy seats, ergonomically arranged knobs and dials, easy handling, and emphasis on safety—pure Saturn as well, she argues. Saturn may not be as strong as it has been if GM had pumped new money into the pipeline years ago. But for its customers are still rooting for the underdog. Says Stevenson: "Saturn is the best thing that has happened in America." Maybe, but if GM ever so long again to give its youngest a new vehicle, the rings around it will be put there by its rivals.

Kathleen Kerwin in Troy, Mich., Keith Naughton in Detroit



99 approves a Saturn sport vehicle to be 001 at its Hill (Tenn.) plant

JULY 1999

The new midsize L-series arrives at Saturn dealerships

STEEP GRADE FOR A RAIL DEAL

Taking over Conrail has snarled CSX and Norfolk Southern

Six months ago, a confident Norfolk Southern CEO David R. Goode outlined the extensive—and expensive—preparations that Norfolk Southern and its rival, CSX, had shouldered to make sure their 1997 takeover and division of Conrail stayed on track. Despite the complexity of absorbing the 10,700-mile Northeastern system, the two rail giants were determined that the trains would keep rolling. Still, Goode predicted, "no matter how well we plan the transaction, something is going to go wrong."

He was right. Three weeks after Conrail's network was finally divided on June 1, shippers—particularly in Pennsylvania and Ohio—are complaining about late trains and misrouted cars. Analysts are busy trimming second-quarter earnings estimates for Norfolk Southern Corp. and CSX Corp. in light of heavier-than-expected integration costs. And some rail watchers fear that any long-lasting problems could fuel a re-regulation effort. "We didn't expect anything like this," says Edward H. Rastatter, director of policy at the National Industrial Transportation League, a major shippers' group that has fielded "dozens" of complaints since June 1.

COSTLY SHIFTS. Certainly, the problems so far do not hold a candle to the rail gridlock that followed the 1996 Union Pacific Corp. takeover of Southern Pacific Rail Corp. "We're not at meltdown," says Norman Black, a spokesman for big rail customer United Parcel Service of America Inc. Nonetheless, UPS recently shifted half of its former Conrail traffic to the highways because of delays that were running from 3 to 12 hours on both CSX and Norfolk Southern. Millennium Inorganic Chemicals' plant in Ashtabula, Ohio, recently shipped four freight cars for the week instead of the usual 30 on CSX because it couldn't get enough empty cars, says distribution manager Jack Prugh. The move is costing an additional \$70,000 a week.

Considering the two years of planning

that went into these rail marriages, the breakup of Conrail was supposed to be the smoothest rail deal yet. Both CSX and Norfolk Southern have added hundreds of workers and locomotives and spent nearly \$2 billion to move the added freight. Plus they signed new labor pacts before the merger. "People underestimate the problems that are associated with asking thousands of people to do things a new way," says James V. Dolan, vice-president for law at Union Pacific.

Frustrated investors, meanwhile, are

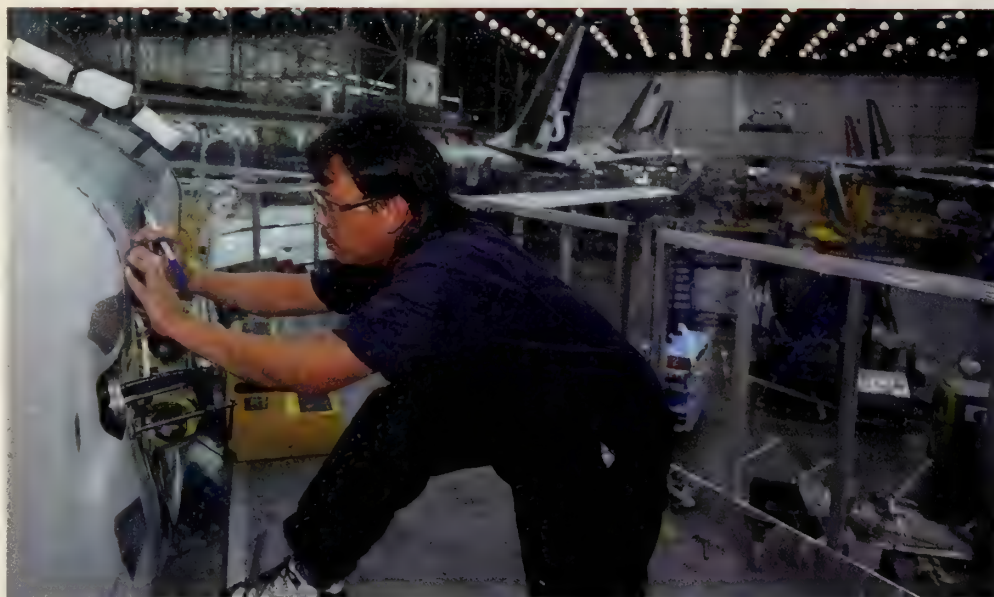


DELAYED With two years of planning, the breakup of Conrail was supposed to be fairly smooth

still waiting for earlier rail mergers to deliver promised payoffs. Burlington Northern Santa Fe Corp. has worked out the kinks from its 1995 merger, but analyst Anthony P. Gallo of Deutsche Bank Alex. Brown notes that "earnings growth has been very lackluster."

Shippers think the next few weeks will prove critical, especially for Norfolk Southern, which appears to be suffering the worst problems from computer glitches. The railroads should get a bit of breathing room when carmakers take their regular two-week summer production shutdown in July. "I'm very confident you won't be calling me in August to talk about this," says Jon L. Manetta, senior vice-president for operations at Norfolk Southern. At CSX, Executive Vice-President Michael J. Ward believes his system will be in good shape by the start of the late-summer shipping season. But until the two are back on track, shippers will be watching and worrying.

By Wendy Zellner in Dallas



LABOR

BOEING'S UNIONS ARE WORRIED ABOUT JOB SECURITY—THE CEO'S

A brawl could cost the boss his job—and bring in a hard-liner

Boeing Co. workers have plenty of reasons to strike. They're clocking scads of overtime to help the aerospace giant churn out a record number of planes while the company is laying off 48,000 employees. Still, when talks begin on June 28 between Boeing and the International Association of Machinists (IAM) over a labor pact that expires on Sept. 1, union leaders will be just as eager as management to ward off a strike.

Why? Privately, IAM officials worry that a brawl like the 69-day strike in 1995 could cost CEO Philip M. Condit his job, leaving them to deal with hard-liners such as President Harry C. Stonecipher, or one of his protégés. So far, Condit has avoided the ax despite board dissatisfaction over Boeing's production-line snarls and the resulting losses. But the snafus forced his one-time heir apparent, Ronald B. Woodard, to resign last fall as head of the Seattle-based giant's commercial aviation unit.

CHOOSING SIDES. "We like Phil. He's the least of our concerns," says Dick Schneider, the IAM's chief Boeing negotiator. Union leaders appreciate Condit's efforts to solicit their opinions on recent production problems. In contrast, they distrust Stonecipher, who has been vocal about Boeing's need to cut costs. Jerry Calhoun, Boeing's union relations vice-

president, won't discuss Condit's precarious position, but says that it "frames the reality we have to deal with" in the labor talks.

The mounting labor tension stems from member anger about layoffs that are coming just as they finally managed to meet overly ambitious production goals. Boeing is set to crank out a record 620 planes in 1999. But it's still slashing payroll by 20%, from a peak of 238,000 last year, cuts that will hit the IAM's 48,000 members, too. The reason: a need to boost efficiency and bring down costs, coupled with an expected production downturn in 2000 because of a sharp falloff in orders from Asia.

To avert a walkout, Calhoun and Schneider have been meeting regularly even before formal talks open. The IAM wants Boeing to set guaranteed employment levels, tied to revenue growth. This wouldn't prevent cyclical job swings, but it could prompt management to moderate

DIVIDING THE TROOPS:

Boeing has been bringing workers from suppliers onto its factory floor

hiring and layoffs. Calhoun says the idea hasn't been ruled out.

The two sides are also grappling with subcontracting. Boeing has been outsourcing more and even bringing workers from suppliers onto Boeing's factory floors, where they do work previously done by union members. The same issue helped prompt the 1995 walkout. To settle the strike, Boeing agreed to add the union of subcontracting, involving 50 or more jobs. They could then try to match the supplier's costs to retain the workers.

However, the union says it has lost the detailed financial information needed to make the process work. Now, Schneider says he wants to form joint management-union committees to study sourcing decisions.

VOLUNTEERS. Boeing's ideas for saving jobs are equally controversial. Management wants to run plants around the clock and on weekends to avoid bottlenecks. Boeing could do so now, but by paying time and a half. If they agreed to straight hourly wages, they would add employees and mitigate layoffs," says Calhoun.

He hopes to overcome the IAM's opposition by using volunteers for irregular schedules. But the IAM fears that

open the door to mandatory weekend work down the road. Indeed, Boeing recently rebuffed an offer for voluntary flexible scheduling from its white-collar union, whose labor pact expires in December. "It's fine if employees agree," says Charles Bofding, head of a union representing 22,000 Boeing engineers and his group's of-

THE MACHINISTS' CHECKLIST

- ✓ **JOB SECURITY** Looking for guaranteed employment levels to counter 48,000 planned layoffs
- ✓ **SUBCONTRACTING** Pushing for tighter controls on outsourcing
- ✓ **BOARD SEAT** Asking that one director's seat be considered a union slot
- ✓ **WORKWEEK** Resisting Boeing's demand for 7-day work weeks and 12-hour shifts

DATA: BUSINESS WEEK

"But if you're going to dictate weekend work, you have to pay extra."

IAM leaders could try to strengthen their hand by playing up members' anger. After all, a strike would be bad news for Boeing, too. But if the two sides avert a showdown, no one will be happier than Phil Condit.

By Aaron Bernstein in Washington

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STRATEGIES

'THE NAME COKE NOW SCARES PEOPLE'

The contamination mishap could slow its advance in Europe

The European bans on Coca-Cola sales are starting to be lifted. Belgium announced on June 23 that it was ending its prohibition on all Coke sales except those from vending machines. But it will be a long time before the Belgians—or many other Europeans—let the soft-drink company forget the recent Coke contamination or the company's defensive public denial after some 200 youthful Coke drinkers first took sick on June 9.

For Coke and its chairman, M. Douglas Ivester, that may mean more than just some serious groveling will be necessary. Coke could be forced to scale back its efforts to expand and consolidate bottling in Europe. At the very least, according to Stephen Kinsella, a Brussels-based antitrust specialist with the British law firm of Herbert Smith, Coke's plans will likely receive additional scrutiny from regulators. "The name Coke now scares people," he says. "It's going to be trickier for [Coke] to take offensive moves in Europe." Most at risk: a scheme to buy Groupe Pernod Ricard's Orangina.

ALREADY HOSTILE. This is hardly the first time Coke has left a sour taste in European regulators' mouths. Last December, it infuriated European Commission antitrust authorities, including Commissioner Karel Van Miert, by structuring a planned purchase of Cadbury Schweppes PLC's non-U.S. soft-drink business to avoid regulatory scrutiny. "Coke surprised us," says Stefan Rating, a Van Miert aide. Van Miert threatened to review the deal despite Coke's maneuver. In May, Coke withdrew its request to take over Cadbury's brands in most of Europe.

The current mess stands to make Coke even less popular with European authorities. That could also affect Coke's plans to consolidate its European distribution, for example. The company wants to consolidate around four anchor bottlers. Coca-Cola Enterprises Inc. recently announced plans to merge with Greece's Hellenic Bottling Co. But the European Commission has said that Coke's increased control over the soft-

drink distribution channel could hurt competing brands. "We'll take a close look," promises Rating.

Unfortunately, Coke's size works against it in Europe. When it tried to take over Orangina, French regulators bristled because Orangina also distributed Pepsi in France. Coke has offered to create an independent distribution company, but many French politicians still

though Coke now has 49% of the pean soft-drink market, it can't afford to lose ground. Europe provides 20% of the company's \$18 billion in revenue.

Coke also has to worry whether the turmoil will prompt consumers to switch. While Pepsi will do nothing to take advantage of Coke's problems, it is boosting production to meet demand, a spokesman says. Meanwhile, Chaudfontaine, Belgian beverage company, says sales of its soft drinks and its licensed Virgin brand have been running 10 times higher than normal since Coke was banned.

Still, many industry watchers are confident Coke will bounce back. "I now they're doing the right thing," says Marc Cohen, a beverage analyst at Goldman, Sachs & Co. For its



CONTINENTAL WOES

CONTAMINATION

Four European nations banned the sale of some all Coke products after Coke drinkers became sick in France and Belgium.

ANTITRUST PROBLEMS

France is holding up Coke planned takeover of Orangina, and Coke has already been forced to scale back purchase of Cadbury Schweppes' soft-drink brand outside America.

BOTTLING BATTLES

The European Commission questioning whether Coke should be allowed to consolidate its European bottling operations.

DATA: BUSINESS WEEK



Toutes mes excuses
aux consommateurs
de Belgique.

IVESTER EXPLAINS; BRUSSELS MARKET

dislike the idea of Orangina being anything but French. "There's a definite fear

here of Coke's domination," says Luis Mariani, an analyst at J.P. Morgan & Co.

And why not? Coke has made major inroads in Europe. Per capita consumption of all Coca-Cola soft drinks has risen from 63 eight-ounce servings in 1993 to 93 in 1998. Today, the company outstrips Pepsi's sales in parts of Europe by as much as nine to one, according to Donaldson Lufkin & Jenrette. Al-

Coke is determined to regain its foot. "We'll spend whatever is necessary to regain the confidence of Belgian consumers," Ivester told reporters on June 23, predicting that Coke would double European sales over the next decade.

But first Coke has a lot of catch-up to do. Ivester conceded that the company must "take a low profile and be respectful of the government agencies' views on its future dealings in Europe. Per capita consumption of soft drinks remains well below American levels in much of Europe. But it may be a while before Europe lets Coke capitalize on the expansion possibilities.

By William Echikson in Brussels
with David Rocks in Atlanta

Knock knock.

Who's there?

(Say the name of your company).

(Pause). Who?

developed the merchandising
plans that launched five new
of iMacs in 14 countries
neously. Yum.

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online advertising and direct
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GOLF

WINNING IS EVERYTHING

Stewart's U.S. Open triumph has him rolling in green

Payne Stewart wasn't the only one ready to boogie after his dramatic victory to the 99th U.S. Open Golf Championship on June 20. The next day, it was party time at Legg Mason Wood Walker brokerage in Baltimore. The reason?



STEWART: His win helps a half-dozen companies

Last January, Legg Mason signed Stewart to a three-year, \$900,000 sponsorship package under which he sports the Legg logo on his sleeve and cap. That gave the investment house almost as much exposure at the U.S. Open as the mighty U.S. Golf Assn. "I haven't had too many better days," said Tal Daley, senior vice-president

for marketing at Legg Mason Funds.

In fact, Stewart's triumph is a boon for a half-dozen companies with which the golfer has endorsement ties, including Golfsmith International, Titleist, Business Jet Solutions, and Pincus Brothers-Maxwell. "This reenergizes Payne Stewart as golfer and endorser. Right now his value is very hot," notes Rick Burton, director of the James H. Warsaw Sports Marketing Center at the University of Oregon.

Corporate sponsors haven't always been so excited about Stewart. At 42, he had been winless for four years before the '99 PGA Tour season began. But hours after his victory, Titleist took out a full-page ad in *USA Today* to spread the word that Stewart rolled to victory using the company's Professional 90 ball. Legg Mason officials discussed plans to feature Stewart on billboards. There were even predictions of a rebound for Stewart's underexposed clothing line.

Stewart makes out, too. Titleist and Golfsmith pay five-figure bonuses for winning a big championship. And each time he cashes a paycheck, a chunk goes to his million-dollar-plus portfolio—managed by Legg Mason, of course.

By Mark Hyman in Baltimore

COMMENTARY

By Steven V. Brull

DVD AND CONQUER: WHY ONE TECHNOLOGY PREVAILED

It seemed a marketer's nightmare. Replace the hottest consumer-electronics product in a generation—the VCR—with one that had few hot new features and cost more. Then watch as a competing product is launched with the help of the top consumer-electronics retailer. That's what confronted the marketers of the digital video disk, or DVD.

But DVD is fast becoming the most important consumer-electronics product since the VCR. Just as DVD began to sell in 1997, a rival system, Divx was announced. That slowed DVD sales—but now they're on a tear: DVD sales could double this year, to just over 2 million units, and reach 5.6 million by 2002, says forecaster Info Tech Inc. And on June 16, sponsor Circuit City Stores Inc. unplugged its Divx venture, incurring losses of about \$375 million.

DVD owes its victory not to tech superiority but to shrewd strategic planning. Key to its success was knitting a tight alliance with Hollywood, which wanted long playing time, high image and audio quality, and a parental "lockout" feature. But it wasn't until recently that studios began to make thousands of films available on DVD. Manufacturers, such as Toshiba and Sony, also slashed prices and poured tens of millions into advertising and promotion.

SHORT-CIRCUITED. Divx, meanwhile, save for Circuit City, had little support. The idea behind Divx was to let consumers buy a disk for the price of a regular video rental. It could then be viewed during a 48-hour period. After that, viewers could throw the disk away or pay an extra \$15 to get permanent, unlimited viewing. There would be no more worries about late

fees at the video-rental stores. Viewers, however, would have to give a credit-card number, and then agree to be billed automatically and allowed viewing to be monitored through phone lines they used for the system.

In the end, Divx flopped: It sold only 87,000 units in 1998 and an estimated 150,000 in 1999. Why? Because hardware makers, Hollywood studios, and retailers redoubled promotional efforts for DVD. Only the manufacturers agreed to produce Divx decks, and analysts say they did so to avoid annoying Circuit City. Meanwhile, all but about 750 of some 10,000 stores nationwide refused to carry Divx lest they line the pockets of rival Circuit City. Video-rental



FORMAT WARS Retailers closed ranks around DVD, since Divx was Circuit City's baby

chains had even more at stake. They saw Divx as cutting their store traffic in half, so they started introducing DVD rentals.

Perhaps worst, given DVD's high profile, Divx ads often backfired. Customers would go to stores that offered only DVD players. That's a salutary lesson in the law of unintended consequences. And a Divx marketer's nightmare.

Brull covers consumer electronics and technology from Los Angeles.

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EDITED BY KELLEY HOLLAND

I'LL TAKE 1,000 SHARES OF NASDAQ

WANNA BUY SOME NASDAQ stock—stock in NASDAQ itself, that is? The National Association of Securities Dealers is discussing plans to convert to a for-profit exchange, CEO Frank Zarb said on June 23. NASD would first spin off its regulatory arm. NASDAQ stock then would be sold, first to NASD's broker-dealer members and then the public. The move would raise capital for new technology to meet competition from electronic-trading networks. But NASD officials are backing away from another innovation: after-hours trading. They're hoping a June 30 Securities & Exchange Commission summit will persuade regulators to stall electronic

upstarts that want to launch evening trading in July. "Extended hours shouldn't be implemented piecemeal," says Zarb, who wants NASDAQ and the New York Stock Exchange to launch a second shift sometime in 2000.

WHO'S DISABLED? THE COURT RULES

EMPLOYERS WON BIG ON JUNE 22: The Supreme Court ruled in three cases that a federal ban on discrimination against the disabled doesn't cover individuals with correctable conditions. The cases involved two nearsighted pilots who were denied employment by United Airlines, a mechanic with high blood pressure fired by United Parcel Service, and a truck driver denied a job because he was blind in one eye. The companies said the plaintiffs were unsuitable for the jobs, but could not be deemed disabled. Employment lawyer Peter Petesch, who filed a friend-of-the-court brief for the Society for Human Resource Management, says the ruling "places some appropriate limits on the pool of persons who are protected under this law."

ALTERING THE MIX AT MCKESSON

DRUG DISTRIBUTOR MCKESSON HBOC is undergoing radical surgery. On June 21, the company said Chairman Charles McCall and six other top executives had resigned or been dismissed. It named insiders John Hammergren and David Mahoney to be co-CEOs. The move follows McKesson's April disclosure of improperly recorded revenues at its newly acquired health-care software maker, HBO & Co. First step for the co-CEOs is to complete a financial audit. "Nothing can be done about restoring Wall Street credibility until we have the baseline [assessment]," Mahoney says.

HEADLINER: MILES WHITE

REFORMULATING ABBOTT

Abbott Laboratories CEO Miles White had to resort to tea and honey after losing his voice, but that barely slowed him down as he went about selling Abbott's \$7.3 billion acquisition of ALZA to investors. Early signs were that Wall Street was somewhat hesitant about the price paid for the deal, designed to bolster the \$12.5 billion company's drug pipeline with new oncology, urology, and drug-delivery products. "I'm not yet sure ALZA was the right move to make," says SG Cowen analyst Michael Mullen.

Still, the deal, announced

June 21, showed that the maker of antibiotics, infant formula, diagnostic gear and AIDS drugs is stirring after White, succeeded Duane Burnham earlier this year. The ex-McKinsey consultant joined Abbott in 1984 and headed Abbott's diagnostics unit, where he engineered the 1996 acquisition of MediSense. White insists the ALZA deal will boost Abbott's lagging earnings within a year. And, he says, more deals are ahead: "There are a lot of things I'd like to strengthen." Including his voice, of course.

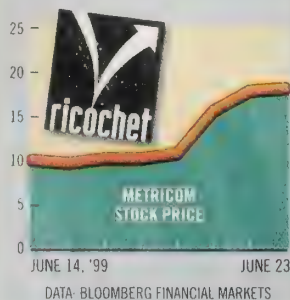
By Richard Mel...



CLOSING BELL

LIFTOFF

Investors are gaga over the prospect of airborne Internet access. On June 21, wireless startup Metricom said MCI WorldCom and Microsoft co-founder Paul Allen would each infuse \$300 million into the Los Gatos (Calif.) company and assume a controlling interest. The cash will fund the rollout of Metricom's Ricochet service, offering wireless E-mail and Net surfing at unparalleled speed, to 12 markets by mid-2000. Metricom's stock rose 64% in three days, to close at 18 1/2 on June 23.



A STEEL BILL BUCKLES UNDER

U.S. STEELMAKERS LOST A key Senate vote on June 22 when a bill to impose quotas on foreign steel failed to clear a procedural hurdle. Steelworkers had lobbied hard for the legislation and expected smooth passage. But Senate Majority Leader Trent Lott (R-Miss.) joined White House officials in opposing quotas out of concern that such sanctions could spark a global trade war. The test vote on quotas followed Senate passage on June 18 of a bill to create a \$1.5 billion loan program for U.S. steel, oil, and gas producers hurt by low prices.

IRIDIUM CHANGES ITS NUMBERS

IRIDIUM IS TRYING A NEW line. On June 21, the embattled satellite phone company announced a new price-slash-

ing strategy to help bring flagging sales of its 8-month-old service. Iridium will shift its focus from market to global business travelers, industrial customers, such as oil-rig workers, who have demonstrated need for global calling service. Iridium, which has been in technical default on \$800 million credit, expects to come up with a new financial work plan with investors and lenders by early July.

ET CETERA...

- Advanced Micro Devices says it will lose \$200 million in its second quarter.
- Qwest Communications raised its bid for U.S. West and Frontier.
- 3Com warned of slow sales, and its stock fell 10% on June 23.
- Goldman Sachs reported better-than-expected 3% gain in quarterly earnings

CONNECTING WITH TIME WEAVERTM

HOW CHRONOLOGUE SYSTEMS HELP PEOPLE
COMMUNICATE ACROSS TIME AND SPACE

Monday morning. You arrive at the office, mentally reviewing the day's many meetings, and are pleased to discover that your executive assistant has already notified the other participants, reserved conference rooms, and ordered refreshments. He also informs you that you're scheduled to leave on an afternoon plane to Detroit, where he has booked a rental car and a room at your favorite hotel. Knowing that your brother lives nearby, he asks if you would like to arrange a dinner. And then, before you go, he reminds you that you've been meaning to get Bill Gates's book *Business @ the Speed of Thought*. Would you like a copy waiting in your hotel room for the flight home?

An ordinary scenario? Not likely. But in the near future, a certainty — except that your executive assistant will not be a flesh-and-blood human, but a bits-and-bytes electronic advisor, available at the flick of a computer switch. It's all part of an ongoing digital revolution that's sweeping board rooms and back offices across America, and it will make its way even deeper into the time management space starting this August, courtesy of TimeWeaver.com, the electronic calendaring unit of San Jose, CA-based Internet applications developer Chronologue Systems.

TAKING THE WORLD WITH THEM

Not too many years ago, business people were virtually disconnected from their world once they left the home office. Now, technologies ranging from pagers to cell phones to notebook computers permit business executives to 'take their world with

them' when they travel. And the more sophisticated the applications they house, the more powerful these technologies become. Case in point: computing and the Internet.

Over the past five years, Internet-based computing has made it possible for business people to connect with one another, anytime, anywhere, anyhow. "But the voluminous information available on the Internet risks overwhelming even the most dedicated business users," contends Chronologue Systems CEO Tom Ku. "To be effective, Internet-based

time management applications must reverse this practice, delivering information only when, where, and how it is needed and with particular sensitivity to user's specific needs and preferences.

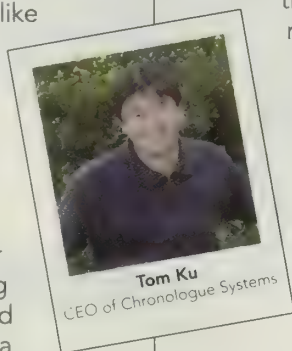
The result of this philosophy is the TimeWeaver Advisor, an Internet-based time management system with special utility for business users who depend upon remote devices like notebook computers. "It's the next evolution of the electronic calendar,"

Ku points out, "an 'intelligent personal advisor' that learns a user's needs and preferences and proactively suggests events, highlights calendaring conflicts, shares scheduling information with other users, and enables online purchases."

"Most importantly," he emphasizes, "it presents all of these functions to users in a highly context-sensitive, time-aware fashion."

EXECUTING THE PLAN

Few executives are as well-positioned as Ku to build such a transformational application. A veteran of nearly 20 years in the Silicon Valley IT industry, Ku most recently headed the



(Continued)

TAKE THE WORLD WITH YOU

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CONNECTING WITH TIME WEAVER

global professional services practice of BEA Systems. Prior to that, he was a leader of the IT consulting division of Sun Microsystems and manager of the company's European customer service centers.

The team he has assembled is just as impressive — all of them, for instance, have direct experience in creating sophisticated electronic time management tools. Included in the group are the senior applications engineer from one of the first Internet portal companies; the senior middleware architect for the top Internet trading system; and the former Sun Microsystems engineers who developed the internal calendaring and communications system for the \$11 billion global hardware maker.

"In our opinion, the real value of next-generation applications will be the ability to cull from the Internet's encyclopedic content only what is useful to a particular user at a particular time — just as a human personal advisor would," Ku explains. "I wouldn't dream of trying to execute this plan without some of the best engineers in the world."

AN INTELLIGENT PERSONAL ADVISOR

Perhaps most important to TimeWeaver's success, however, is the way in which the application is being designed from the start to incorporate the needs, expectations, and work styles of its individual users (see box). This quality gives TimeWeaver's Advisor several qualities that elevate it well above the level of current electronic calendars, transforming it into a true intelligent personal advisor.

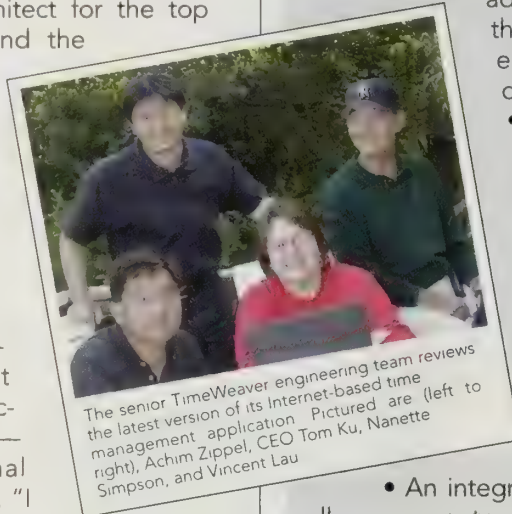
Architected in this way, Ku believes, TimeWeaver's Advisor will do what no electronic calendar has achieved thus far: become a proactive, personal agent that enables users to make far more efficient and productive use of their time.

The ultimate objective, he says, is to allow TimeWeaver users to remain at the center of their digitally interconnected world. Working from nothing more than a notebook computer, business people will conduct business as easily as if they had a roomful of personal advisors laboring beside them, supplying answers and information at just the moment they're needed.

WHAT THIS MEANS FOR THE USER

TimeWeaver's Advisor offers a number of advanced user-centric features that elevate it above existing electronic and Web-based calendars, including:

- An adaptive user interface that not only permits extensive customization but that dynamically adjusts to the information being presented.
- Completely personalized delivery of events to ensure that users receive time- and context-sensitive information when, how, and where they most need it.
- An integrated work environment that allows users to schedule meetings, review events, send messages, and eventually complete e-commerce transactions — without having to re-enter data or leave the application.
- The ability to coordinate schedules and resources over the Internet with colleagues not just within one's own department, but across companies, cities, or even continents — without the need for a proprietary network.
- Easy synchronization with Palm Pilots and client-based calendars like Microsoft Outlook, as well as automated e-mail, page, or telephone notification to remind users of calendared events.



The senior TimeWeaver engineering team reviews the latest version of its Internet-based time management application. Pictured are (left to right), Achim Zippel, CEO Tom Ku, Nanette Simpson, and Vincent Lau

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BUSH SENDS GORE A MESSAGE: YOU DON'T OWN SILICON VALLEY

owa, he backed ethanol subsidies. In New Hampshire, he vowed his first moves in the White House would be to cut taxes and boost arms spending. In South Carolina, he won blessings by urging sexual abstinence for teens.

When Texas Governor George W. Bush's fast-moving, talk-show campaign rolls into Silicon Valley on June 30, a side of the GOP front-runner will be on display: George W. Valley Boy.

Though Bush's own business tastes run to oil and sports, as governor, he has been rubbing shoulders with the elite of Austin's "Silicon Hills"—home to many software and semiconductor companies. Bush aims to tap that network as he prepares to take on GOP rivals and Al Gore for high office, heart, mind, and wallet (page 48). For months, a group led by executive-communications Chief Executive James Barksdale and Austin software entrepreneur Steve Papermaster has sent tech delegations to meet with Bush at the state house. "Bush gets the economy," Papermaster says. "On any issue—improving education—he has an exceptional record."

RED SPIRITS. The payoff could come on June 28, when Bush unveils his high-tech advisory committee. Among those expected to sign on: National Semiconductor CEO Brian L. Sanders, Advanced Micro Devices CEO W.J. Sanders III, Oracle Financial Officer Jeffrey O. Henley, Apple Computer co-founder A.C. Markkula, Intel Founder Gordon E. Moore, Systems Chief Technology Officer Judith L. Estrin, Applied Materials CEO James C. Morgan. Valley financiers will be well represented. Bush has signed up venture capitalists, such as Kleiner Perkins Caulfield & Byers' E. Floyd Kvamme, Menlo Park rainmaker Timothy L. Fisher, and fund-raiser Robert Grady of San Francisco's Boston Robertson Stephens. "We're kindred spirits,"

says Halla. "If we're looking for the emergence of a second Silicon Valley, it's in Texas."

Bush hopes to rattle Gore with the depth of his Valley support. Beyond that, he will join Republicans in the not terribly subtle wooing of the techies. Hill GOP leaders staged a love-in with industry leaders on June 14-15. And on June 23, House Republicans rolled out an "E-Contract with America" that vows to keep tech out of Big Government's clutches.

Bush won't be above a little E-pander when he appears at two Silicon Valley fund-raisers. He will stress his hands-off approach to E-commerce and Net taxes, trumpet his support for free trade, immigration, and legal reform—and slam Gore's stand on key industry initiatives.

The Vice-President is in a bit of a bind. He opposes a Senate plan to limit lawsuits stemming from the Y2K software bug. He sided with law-enforcement officials in backing strict curbs on exports of data-scrambling technology. And many tech execs still fume over Clinton's 1995 veto of a bill that provided relief from lawsuits against companies that allegedly overstate their prospects.

The veto was overridden, but Gore is getting the backlash. "It was a real slap in the face to growth companies," says Dell Computer CEO Michael S. Dell, another Bush backer.

How will Gore respond to Bush's tech barrage? "Let Bush do his Santa Claus tour of the Valley," says a Vice-Presidential adviser. "Gore has a 20-year record on tech, and that beats the 'gimme-list' approach." Perhaps. But there's no question that Bush's moderate social stance and his tech-friendliness could make him a player in Silicon Land. That may put Gore in the position of defending his tech record in a state he should have safely tucked away.

With Douglas Harbrecht in Washington, Andy Reinhardt in Silicon Valley, and Ira Sager in New York



QUICK STUDY: Bush can talk tech

CAPITAL WRAPUP

CLINTON GO TO RUSSIA?

ager to rebuild relations with Russia after Kosovo, President Clinton wants to visit Moscow this fall. The next U.S.-Russia summit was expected to take place in Washington, but aides say Boris Yeltsin appears weak for the trip. Before the power, Clinton wants the Duma to approve the SALT II treaty. And Yeltsin wants congressional repeal of Jackson-Vanik law, a cold war measure designed to speed the emigration of Soviet Jews.

STRANGE BEDFELLOWS DEPT.

► Former GOP Chairman Haley Barbour has teamed up with media mogul Ted Turner, whom conservatives regard as a one-world-government leftist. The Turner-funded Better World Campaign advocacy group has hired Barbour to persuade Congress to pony up \$1 billion in back dues to the U.N. It has been stymied for two years by House GOP conservatives who want to stop the U.N. from spending money to promote or perform abortions.

POLLING IN CYBERSPACE

► More trouble for Al. The first Internet poll involving a U.S. Presidential contest finds that both George W. Bush and Elizabeth Dole would handily defeat Al Gore if the election were held today. Bush holds a 20% lead over Gore, according to Harris Poll Election 2000 Internet survey. And the Veep trails Democratic rival ex-Senator Bill Bradley by 43% to 30% among independents. The Net poll relies on a database of 3.4 million likely voters and has no margin of error.

JAPAN

CAN HONDA GO IT ALONE?

It has always been the Honda way: an almost fanatical devotion to independence, a hubristic pride about its engineering prowess, and a maverick disregard for conventional wisdom. Defiance has been in Honda Motor Co.'s bones since founder Soichiro Honda disobeyed government orders 36 years ago that he should stick to motorbikes. Now, Honda's preference for the solitary path is about to be tested as never before. The past year has brought vast change to the industry. The DaimlerChrysler deal created a new giant. Ford snapped up Volvo. Much closer to home, Nissan Motor reached out to France's Renault for rescue.

Meantime, Honda has become the auto industry's biggest contrarian: a holdout in the rush to consolidate that most other players view as inevitable. Does Honda, making just 2.3 million cars a year, have the clout to take on the titans who make twice as many cars and trucks annually? Can it afford to match rivals' investments in cars that will meet stricter future pollution standards? Will it be able to foot the bill on its own for the next generation of engine technology—when its rivals, joining forces, will massively outspend it?

In the wake of DaimlerChrysler, Ford-Volvo, and other deals, many say the carmaker should look for a partner



Going it alone is a huge gamble for the world's No. 8 carmaker. The disparity of resources is brutal: Ford has a cash pile of \$23 billion vs. Honda's \$3.2 billion, while General Motors' \$9 billion annual research and development budget swamps Honda's \$2.6 billion effort. **AMONG GIANTS.** Many of the world's biggest players predict an all-or-nothing future populated by tiny boutiques and giant supersellers. Ford Chief Jacques Nasser says that auto makers who sell fewer than 5 million vehicles a year will need partners. As a senior

manager at another Honda company puts it: "It will be a tremendous challenge for Honda to be independent."

A challenge, but not impossible. In early June, Autofacts, a consulting subsidiary of PricewaterhouseCoopers, released its "Global Six" auto makers, naming Honda the best chance of succeeding independently. Although Honda didn't make the cut, Autofacts consultant Greg S. Bonner is loath to write it off entirely. "If Honda were able to become big enough and remain nimble enough, it could survive around for decades without having to merge with anyone," says Bonner.

Yet even those rooting for Honda agree it could do itself a big favor by finding a partner. But don't expect Honda to start looking. Asked what he thought about finding a partner, Honda CEO Shiro Yoshino says: "Nothing. I am not interested in that."



is, however, keenly interested in entering Honda so it can thrive in a global world. Yoshino is betting the company's future on a simple proposition: that a carmaker can save billions without resorting to a megamerger. Already, Yoshino's technical staff is working on new manufacturing methods to reduce the cost of making a car in half.

WINDOW. Beating out other top-class manufacturers will be tough. Honda also is seen as having an edge in state-of-the-art production. To push the envelope in manufacturing, Honda must refine its lineup to far-flung markets by engineering everything from compact cars to heavy trucks on flexible platforms. Honda has a brief window to foreshadow its revolution: Merged rivals will likely struggle to meld different cultures, equipment, and armies of suppliers as Honda upgrades its plants.

Soon, the overhaul could release close to \$1 billion a year in extra cash flow for Honda, whose 7% operating profit margins already exceed Ford's 5% and GM's 4%. Over the decade through 1998, Honda's profit machine has been a marvel. Sales zoomed 80%, to \$52 billion, while net profits tripled, to \$2.5 billion. If Yoshino's plans pay off, then Honda could keep earning like a giant while remaining a nimble player.

But the big question remains: Which new engine technology will prevail—fuel cells, electric batteries, or hybrids of electric motors and gasoline-powered engines? Says consultant Bonner: "It's like VHS and Betamax: Only one format

is going to win, and you had better bet in the right direction." Of course, Honda could just adopt whatever engine standard a rival produces. But that's not Honda's style. Says Yoshino: "We don't like to buy our engines from others."

The alternative is to hedge bets by investing in each possible technology. But just starting a fuel-cell program costs half a billion dollars. Staying the course to a fully developed fuel-cell car could cost \$1 billion. The same thing goes for electric and hybrid engines. No wonder GM and Toyota are already working together on fuel cells. Ford and DaimlerChrysler are in cahoots with Canadian fuel-cell maker Ballard Power Systems. Yet Yoshino is wagering that Honda can produce a better fuel-cell car faster: "It is quicker. And it's under our control."

RIGHT MIX. But the answer for Honda, say many, is to find a good partner. Some regard as ideal a link with Germany's BMW, which, like Honda, excels in engineering. Shortly before France's Renault took a stake in Japan's Nissan, Honda Chairman Yoshihide Munekuni invited several top analysts out for dinner. But when they pitched ideas for partners, says Koji Endo, automotive analyst at Schroders Japan Ltd., Munekuni "just listened and smiled."

It is up to Yoshino to preserve Honda's independence with the right mix of innovative manufacturing, new products, and spot-on research in new engines. "Everything is necessary for our survival," he says. He's right there. Honda can't, for example, afford a major misstep with any of its top-earning models, such as the Accord or the Civic. When Ford's 1996 model Taurus bombed with customers, the carmaker was able

to absorb the hit. In similar circumstances, Honda is more likely to suffer the fate that befell BMW after it took over Britain's Rover in 1994. The big losses subsequently piled up by Rover humbled the company and cost Chief Executive Bernd Pischetsrieder his job.

There are other potential rust spots beneath Honda's golden sheen. It depends on North America for about

85% of its operating profits. Any U.S. slowdown would hit it hard. And DaimlerChrysler will pare down Honda's cost edge if it generates the promised \$3 billion a year in merger-linked savings.

Meanwhile, top Honda brass in the U.S. wants to extend the model line to include big pickup trucks and sport-util-



RIGHT PATH?

At a Shinto shrine, a priest bestows his blessing on a new Honda car



NO SIDEKICK

As the Honda S2000 one-ups luxury rivals, Chief Yoshino says he is "not interested" in a merger



to new SUV models in the Acura line.

Leading Honda in its quest to remain independent is a daunting challenge. It took Yoshino's predecessor, Nobuhiko Kawamoto, three months to persuade him to take the job in the summer of 1998. "This is not an easy task," says Yoshino. Yet in many ways, he embodies the Honda spirit. Yoshino, 59, has earned deep respect from insiders for a stubborn drive he developed early on. As an 8-year-old at the close of World War II, he hiked across Manchuria with his parents to reach his home in Japan. **QUICK SWITCHES.** Once before, in the 1970s, Yoshino saved Honda's skin at a critical point. As chief engineer at the time, he won approval for Honda's

ity vehicles based on them, where gross profits often top \$10,000 per vehicle. "You've got to get in those monster truck races," says Thomas G. Elliott, executive vice-president of American Honda Motor Co. Yet Yoshino insists that making pickup trucks in the U.S. is not in the cards: Honda will have its hands full satisfying demand for its Odyssey minivans.

DAUNTING. Already Honda's redesigned \$23,600 Odyssey, launched in October, 1998, is luring sales away from both Chrysler's \$22,000 Voyager and Ford's \$19,000 Windstar. Indeed, it is so hot that U.S. dealers say they could sell twice as many if Honda delivered more than the current 4,300 monthly.

That's no fluke. To design the new Odyssey, Kunimichi Odagaki, the model's executive chief engineer, traveled in the U.S. with a team of 20 American designers who took sneak photos of people using rivals' minivans. The result was a minivan arguably as American as anything Chrysler has produced. Each seat

has individual overhead lights, like an airplane. And the rear seat folds completely down so there's enough cargo space to carry a 4-foot-by-8-foot piece of plywood.

Yoshino is striving to reproduce that success in an expanded lineup, from minicars such as the \$8,000 Life, which is being sold in Japan, to the \$10,800 entry-level Logo subcompact in Europe

Handicapping Honda

ITS STRENGTHS ...

1. Technology and manufacturing knowhow that lets Honda make cars more profitably than most other carmakers.
2. A global reach that stretches from Brazil to China. Honda sells more abroad than at home.
3. Economies of scale. Honda sells 2 million vehicles a year, but 10 million engines, for everything from lawn mowers to sedans.
4. Research. Its R&D budget now exceeds that of Japan's No. 2, Nissan. Honda spends 5% of revenues on R&D. It has supplied engines for Formula 1 cars for years and has rolled out a dizzying array of envirocars.

... AND WEAKNESSES

1. Honda depends on North America for 85% of its profits.
2. It can't afford a wrong move on big-volume models. Honda relies on Civic and Accord sedans for 55% of sales.
3. The company can't count on raking in profits from gas-guzzling recreational vehicles or luxury cars as its rivals do. Its Acura near-luxury line needs a major overhaul in the U.S.
4. Honda is unable to spread its fixed costs for engineering, technology, and marketing over a huge volume of vehicles.
5. It faces a long road in Europe. It has failed to make a dent in the small-car market, and it stands for ho-hum sedans driven mostly by pensioners.

selling ' CVCC from the U.S. Environmental Protection Agency. He said that the engine met the requirements of the Clean Air Act, though it ran on fuel, unlike competitors'. It gave him the edge it needed in the U.S. "The company depends on that," recalls his colleague Shoichi Majiri, now president of game company Enterprises.

Now, Yoshino defies the newodoxy that size matters. Honda is already squeezing the most of every square inch of factory space. In, for example, it makes as many as eight different models on single asse

the newest North American plant, in 1998 in Alliston, Ont., boasts innovations as a general welder and movable robot arms that in just seconds fuses sheets of metal that wrap the roof, floor, and both sides of an Odyssey minivan. It replaces roughly 137 weld points that took far too long to do the job.

At the same time, Honda continues to roll out new technology. In the spring, for example, it one-upped German car makers Porsche, Mercedes-Benz and BMW with its new S2000 roadster. The car has one of the most powerful engines on the road that meets emissions vehicle (LEV) standards. It aims to trounce Toyota's Prius as the car, powered by gasoline and electricity, when it launches a more fuel-efficient hybrid called the vvv worldwide. Technical virtuosity won't matter as much as Honda builds autos that customers want to buy. In North America, means shifting gears to light trucks. Used to shy away from vehicles such as minivans and SUVs. But now it's in the corner 4% of the U.S. light-truck market, up from a 2.6% share: A minivan utility is coming next year.

IN YOUTH. As rivals go increasingly global, Honda can't focus on the home alone. In Japan, Honda has lost much of the market share it gained in the 1980s when it mesmerized young buyers with a series of hip recreational vehicles such as the \$16,000 Stepwagon. In Europe, the going is even harder. There, Hondas are regarded as old cars for oldies. The company is trying to drum up excitement by going over hot niche vehicles such as the CR-V sport utility and the HR-V, marketed as a "Joy Machine" in Britain promoted through events such as board championships.

The multifront war between auto makers is likely to be an exhausting battle to reshape the industry. David Cole, director of the University of Michigan's Office for the Study of Automotive Transportation, thinks the issue of future engine technology is a make-or-break issue for Honda. Go ahead and make a "big roll of the dice" for the future, says Cole.

The ultimate irony may be that Honda's tradition of fierce independence, which has served it so well for half a century, could be its Achilles' heel. Even Honda used to make an honorable mention with GM or Ford, its distinctive design would make for a stormy marriage. For better or worse, Honda must win its independence succeed.

Emily Thornton in Tokyo and Ken Kerwin in Alliston, Ont., with Naughton in Detroit and bureau

'WE JUST KIND OF SNEAK UP ON YOU'

American Honda Motor Co. President Koichi Amemiya calls it "Sweet Home Alabama" in a bizarre cross-cultural allusion to rebel Southern rockers Lynyrd Skynyrd. That future home is the town of Lincoln, Ala., located 40 miles east of Birmingham, where Honda will build a plant to make Odyssey minivans, a new sport-utility vehicle, as well as engines by early 2002. Total investment: \$400 million, vs. a typical \$1 billion spent by rivals on similar plants.

Necessity drives the tightwad approach. "We're not sitting on billions and billions of cash," says Larry Jutte, vice-president and general manager of Honda of America Manufacturing. That's why Honda factories start small and grow with de-

But analysts have an idea. The new facility can save about \$30 million by bringing in stampings for Lincoln from outside. It will likely run some equipment round the clock to reduce the number of expensive machines it needs.

Key machinery such as welding equipment could also be able to produce different vehicles without retooling stops. Robinet believes the plant will eventually produce an array of vehicles—Civics, Accords, and CR-Vs. "They can use Alabama as a spigot," he says.

Honda Engineering Co. will design much of the plant equipment. While other auto makers rely mostly on outside vendors, Honda prefers to keep designs proprietary and exclusive. "If I buy the same paint shop as

everyone else, what advantage do I have?" asks John Adams, senior vice-president of Honda of America Manufacturing. Honda's engineers came through in Alliston, where the paint shop is 30% smaller than in most car plants, even though minivans are 40% larger. The trick: rolling minivan bodies into a phosphate vat at a 45-degree angle instead of the usual 30 degrees. Alabama is giving Honda the chance to try at least one thrifty move it has never attempted before



mand for their products. "Honda builds facilities that are very expandable," marvels auto consultant Michael Robinet of CSM Forecasting.

All that is a far cry from Detroit's modus operandi, which ING Baring Furman Selz analyst Maryann Keller describes as "operating with too much capacity and force-feeding the market with incentives."

KEEPING MUM. Honda's initial production volumes are often so small—just 60,000 minivans at its new Alliston, Ont., plant—that rivals don't see the competitive threat until it's too late. Says Richard Colliver, American Honda's executive vice-president for sales: "We just kind of sneak up on you."

Honda is keeping mum about exactly how the new plant will look.



FAST START
Honda will put engine making and assembly under one roof at its Alabama plant

in North America: putting engine making and assembly under one roof.

Honda is sure to kick Lincoln off to a fast start. It's proud that Alliston reached full line speed in an amazing 87 days. The company is sure to try to beat that in Alabama.

By Kathleen Kerwin in Alliston, Ont.



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EDITED BY PATRICIA KRANZ

RUSSIA'S PEACE PRIZE: CLOSER TIES TO THE WEST

By applying his bear hugs to his Western counterparts in Cologne at the Group of Eight summit on June 3, Russian President Boris N. Yeltsin was ready to celebrate. By brokering a peace between NATO and Yugoslavian President Slobodan Milosevic, Yeltsin had earned the West's praise and restored Russia's image as a force to be reckoned with. At the same time, his daring gambit to dispatch Russian troops to Kosovo ahead of the NATO force had silenced domestic criticism that he was kowtowing to NATO.

Yeltsin's twin public-relations victories could well mark one of his last big political maneuvers of his first two-year presidency. By playing his cards the way he did, Yeltsin has shored up his long-standing policy of cooperation with the West—despite growing anti-Western sentiment at home. As Russia enters election season, politicians of all stripes will increase their anti-Western rhetoric. But at least for the next 18 months—and possibly until the end of the term—Yeltsin seems determined to smooth relations with the West. The pace of the economic and strategic changes they could bring.

Yeltsin's Russian President flew home from Cologne with a cache of trophies and is looking for even more. In return for concessions on the role of the Russian military in Kosovo and renewing his commitment to arms-control talks, Yeltsin won for Russia a permanent seat at the table with the world's seven most powerful economies. The G-7, now formally renamed the G-8, is promising to help Russia restructure some of its \$70 billion in Soviet-era debt owed to governments and banks, as well as the \$4.5 billion Moscow owes the International Monetary Fund this year.

Yeltsin's biggest spoil of the war is the promise of closer ties with Europe. Kosovo made the issue of European security more urgent for both Russia and the Eu-

ropean Union. Russians were frightened when NATO began dropping bombs on Serbia, which used to be in the Soviet orbit. European members of NATO supported the bombing, but were shaken by the outbreak of war in Europe and their own inability to launch a military operation without U.S. help.

So even as NATO's bombs were falling, newly appointed European Commission President Romano Prodi wanted to make better cooperation with Russia one of the EU's priorities. On June 3, German Chancellor Gerhard Schröder and other EU leaders approved an EU Common Strategy on Russia. The

document calls for increased cooperation on economic and political issues, from bringing Russia into the World Trade Organization and encouraging development of Russia's pipeline system to creating a stability pact for Kosovo.

Even before Kosovo, Europe and Russia were allied in their opposition to the more hawkish U.S. policy toward China and Iran. Closer cooperation could result in a common policy for the development of Caspian Sea oil, where U.S. policy has sought to marginalize Iran. "More and more, it appears that the U.S. does

not know how to engage Russia, but more and more, it appears Russia and Europe are thinking alike," says Alan Russett, director of the Carnegie Moscow Center think tank.

Yeltsin and his government still have to watch out for an anti-Western backlash at home. Even traditional supporters of Yeltsin are demonizing America and the West. NATO has no right to police the world "and commit murder in the name of human rights," declared Boris Fyodorov, a reform-minded banker and former Finance Minister, recently. It's up to the wily Yeltsin to strengthen Russia's Western ties before he departs the political scene.

*By Margaret Coker in Moscow,
with Richard S. Dunham in Cologne*



YELTSIN AND SCHRÖDER: Partners?

GLOBAL WRAPUP

LEAN BAND-AIDS?

President Eduardo Frei is scrambling to reactivate Chile's economy and shore up relations with the military in the months before he leaves office. Frei has unveiled a package of public works projects, housing subsidies, and debt-relief program, while the central bank cut interest rates from 5.75% to 4.5%. Frei also shook up his center-right Cabinet, naming an ally of the military, Edmundo Pérez Yoma, as Defense Minister. Military leaders are happy over the arrest of former dic-

tator Augusto Pinochet in Britain and the reopening of court cases against former commanders in Chile. Critics see Frei's moves as Band-Aids, aimed at easing the way for Ricardo Lagos, a socialist who is the front-runner in December's presidential elections.

INDONESIA WORKOUT

► In a refinancing deal that could set a precedent, conglomerate Astra International has agreed with its creditors to restructure \$1.9 billion in debt. The workout splits the debt into three tranches repayable in periods of 3, 4,

and 7½ years. The deal was the product of six months of hard negotiating by Astra President Rini Soewandi, the daughter of a former Indonesian Finance Minister. She faced off against tough negotiators from Astra's mainly Japanese creditors, including Industrial Bank of Japan Ltd. and Sanwa Bank Ltd. Astra had borrowed heavily in dollars in 1997, mostly to expand its auto-assembly business. Then, like many Indonesian companies, it was hit hard in 1998 as the rupiah depreciated sharply against foreign currencies.

CAMPAIGN CASH

SHOW THEM THE MONEY

A new breed of fund-raiser gears up for Campaign 2000

Forget campaign-finance reform. With the White House, the House, and possibly even the Senate up for grabs, experts say that more than \$3 billion could be spent on the 2000 elections—up from a record \$2.2 billion in 1996.

While the bulk of that will be collected by tried-and-true Establishment fund-raisers, a new breed of younger money hunters is rising from the most vibrant sectors of the U.S. economy: high tech, financial services, and entertainment. They reflect the growing political clout of women, minorities, and religious groups—and they understand the key role that technology, and especially the Internet, will play in the quest for cash.

These four fund-raisers aren't in the same league as Republican Georgette Mosbacher or Democrat Terence R. McAuliffe, but they're up-and-comers. Soon you may be fielding their calls or E-mail—if you haven't already.

■ Exposure to politics started early for **Nancy E. Pfund**. Very early. As a preschooler, Pfund watched her mother, a volunteer for John F. Kennedy, depart for Camelot's inaugural ball dressed in a fancy gown. "It was like a fairy tale," recalls Pfund.

Nowadays, the 43-year-old partner at Hambrecht & Quist Group's venture-capital arm in San Francisco hobnobs with the Silicon Valley elite as a Democratic fund-raiser. Vice-President Al Gore, former Senator Bill Bradley of

New Jersey, and California Governor Gray Davis have all benefited from Pfund's ability to squeeze cash from her Rolodex. Says Pfund: In venture capital, "you're investing in potential. You're betting that a company will achieve a certain result in a certain time. There are similarities in backing a candidate."

NANCY PFUND



AFFILIATION

New Democrat

SPECIALTY

Silicon Valley

COMMENT In venture capital, "you're investing in potential.... [It's similar to] backing a candidate"

For the 2000 elections, Pfund says she'll stump for California Senator Dianne Feinstein's reelection bid. For now, she's supporting Gore for President, having co-sponsored his recent Silicon Valley fund-raiser. But she also recently helped put on a Bradley event. "I like both," says Pfund. Like any politician, she's keeping her options open.

■ MySoftware CEO **Gregory W. Slayton** is rarely without his company baseball cap—free advertising for the Palo Alto

purveyor of packaged software for businesses.

These days, though, Slayton sports a hat emblazoned with the "Silicon Valley Bush 2000," a net of high-tech execs helping to fund W. Bush's run for the GOP Presidential nomination. In the famously all-Valley, Slayton stands out like a pin at an E-commerce conference. And converting other techies, too.

Slayton, 39, is co-hosting the mega-events for Bush this year, a 30 dinner and July 1 breakfast expected to pull in more than \$1 million. It hasn't exactly been a hard sell. "There are a lot of libertarians here," says Slayton. They share Bush's views on taxes and smaller government. According to Slayton, techies, who value results over ideology, also like that Bush has "brought Democrac

GREGORY SLAYTON



AFFILIATION

Bushie

SPECIALTY

Silicon Valley

COMMENT "To mobilize people on a large scale, there's nothing like E-mail"

Republicans together in a state used to have blood-and-guts political

Slayton does much of his prosing on the Internet. "It's tough to get people here to go to events because everyone's so busy," he says. "To mobilize people on a large scale, there's nothing like E-mail."

Slayton was a Fulbright scholar at Dartmouth, earned an MBA at Harvard, and started his business career developing a telecom practice for McKim & Co. in Buenos Aires. He revived a nearly bankrupt Internet comp

aph International, before being ed in 1997 to nurse then-ailing ware Co. back to health. addition to hitting up pals for GOP, Slayton raises money for Op-ity International, a nonprofit that arranges loans to entrepre-in the Third World. In a sense, ing the same thing for Bush: arg- an infusion of cash for a Presi-startup.

Griffin's political epiphany oc- seven years ago while she was ng the Republican National Con- in Houston. Griffin remembers vative Presidential hopeful Pat an looking at the camera and de- "We're going to take our country om them," Griffin says, she sat up. lized he was talking about me," r Griffin, an African American who en a Prudential Insurance Co. "Those were fightin' words." (The quote from Buchanan was: "We

Griffin's leadership is a departure for the WLF, founded in 1993 and dominated by well-heeled white women. But Griffin, who came to Washington in 1988 as a Prudential lobbyist, learned her skills from a pro—the late Ronald H. Brown, former DNC chairman and Commerce Secretary. Brown recruited her to the Democratic cause. "One of the things I bring to the table is a network—or several—that weren't necessarily a part of WLF culture: African-American women, minority businesswomen, women who aren't rich."

A key goal is making small donors feel welcome. Events range from \$25-a-head to \$10,000-a-head affairs. "I try to do my homework so I know what people can say yes to," says Griffin, a divorced mother of two grown sons who left the Pru earlier this year to set up her own consulting firm.

Griffin can count on firepower from Tipper Gore, the WLF's honorary chairwoman, and Hillary Rodham Clinton.

ed a Potomac River cruise to launch a new fund raising drive for GOP House conservatives. Many of the guests were heavy hitters from the Religious Right. But when pledge time came, the first to sign up was no churchgoer. It was **Jack Abramoff**, an Orthodox Jewish lobbyist who is among the right wing's most aggressive fund-raisers.

A onetime movie producer, the 40-year-old Abramoff has close ties to House Majority Whip Tom DeLay (R-Tex.) and former Christian Coalition executive director Ralph Reed, who has been a guest of the Abramoffs for Passover seders. "People of faith tend to hold similar political views," says Abramoff, who is with the Washington office of Seattle law firm Preston Gates & Ellis. Like others on the Right, Abramoff opposes stiff gun curbs and decries estate taxes as "morally devoid of content and economically senseless."

This year, Abramoff expects to rake in at least \$4 million for GOP candidates,

mostly House lawmakers in marginal seats. He'll host some 50 events, often using his personal skyboxes at Camden Yards (home of the Baltimore Orioles) and the MCI Center (home of the Wizards) in downtown Washington.

Abramoff can shake money trees that are off the beaten path for Republicans. One is a growing network of East Coast Orthodox Jews. Indian tribes are another: Abramoff's clients at Preston Gates include the Choctaws of Mississippi and the Chitimachas of Louisiana. Abramoff also turns regularly to a dozen or so film producers.

Abramoff earned his spurs in the radical right at Brandeis University, a liberal bastion. After graduating in 1981, he moved to Washington to chair the College Republican National Committee, earned a law degree at Georgetown, and took up conservative causes.

A chance meeting with a friend who had a grant to make a movie launched Abramoff's film career. He made a handful of action flicks, including *Red Scorpion* and *Karate Masters*. A father of five, Abramoff defends his violent flicks: "In my movies, the bad guys got killed."

By Amy Borrus in Washington, with Louise Lee in Silicon Valley

JANICE GRIFFIN



AFFILIATION Team Dem
SPECIALTY Women/Minorities

QUOTE "I try to do my homework so I know le can say yes to"

ake back our cities, and take back ulture, and take back our country." hanan spokesman says Griffin mis-tered Buchanan's words.) ay, Griffin, 50, is one of the top- g women on the Democratic Na- Committee and one of its most ant fund-raisers. As head of the n's Leadership Forum, she runs a rk of 30,000 women donors and sts. In the 1996 campaign, the fo- lled in \$5.8 million. Griffin's goal mpaign 2000: raise \$6 million and d the WLF's network to 100,000.

JACK ABRAMOFF



AFFILIATION Religious Right
SPECIALTY Offbeat Groups

COMMENT "People of faith tend to hold similar political views"

The most successful event so far: a Mar. 3 New York dinner hosted by the First Lady that attracted 900 people and raised close to \$600,000. With polls showing Republican front-runner George W. Bush closing the gender gap, Vice-President Al Gore has a lot riding on Griffin's ability to woo women—and their wallets—to the Democratic fold. ■ Amway President Dick DeVos and his wife, Michigan Republican Party chairwoman Betsy DeVos, in May host-



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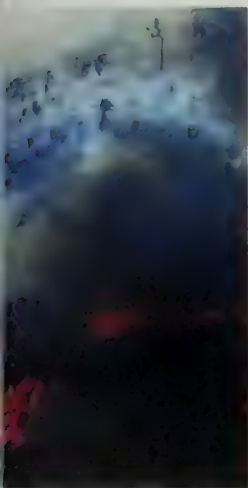
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BY NEIL GROSS



ING THE FORESTS RE)BREAK

DROUGHT-STRICKEN EL years of 1997 and 1998, fires associated with ing and logging trig- raging fires in the rain of Southeast Asia and mazon. Their unprece- l severity shocked res- and researchers alike. Mark A. Cochrane and leagues at the Woods Research Center in chusetts have identified echanism that caused fires to blaze out of l.

a tropical rain forest, Cochrane, a low-inten- are creates more fuel t consumes, because it hruhs and trees with- urning them, leaving or later fires. As a re- the next fire may be than 10 times hotter n kill even the largest The opposite happens perate forests, where lic fires are an ecologi- cessity, consuming dry that could otherwise arger blazes. To help at future conflagrations pical forests, Cochrane mends establishing fire- s before intentional s and prohibiting ag near agricultural

Evelyn L. Wright

NEWFANGLED OVENS THAT PROVIDE HASTE AND TASTE

WHEN IT COMES TO COOKING, convenience has a cost. Ask anyone who has feasted on the gray, flabby flesh of microwaved meat or tried to bake a cake on the quick. Now, manufacturers are coming out with superfast ovens that claim to provide conventional-oven taste with near-microwave speeds.

GE Appliances'

Advantium oven, for exam- ple, uses three blistering-hot 1,500-watt halo- gen lights to bake cookies or roast a chicken

at least four times faster than conventional ovens. Combining microwave and hot lights, the oven cooks food inside and out simulta- neously. For most foods, the

\$1,300 oven will consume only half the electricity of a conventional oven.

For about \$1,600, you can get an oven called the Flash- bake 120 from Quadlux Inc. of Freemont, Calif. Like the Advantium, it bakes, broils, grills, and roasts with high- energy halogen lights.

And South Korea's Sam- sung is funding tests for an exotic microwave oven that was developed at Rutgers University. With cooperation from the food industry, this



oven will read special labels on food and alert the user when it spots ingredients that he or she wishes to avoid. The smart ovens will also recognize voices. *Diane Brady*

VIDEO GAMES MAY HEAL, NOT HARM

PSYCHOLOGISTS CAN'T AGREE ON WHETHER BLASTING FOES in virtual 3-D worlds promotes killer behavior in adolescents. But scientists working with teenage epilepsy patients are gaining striking new insights about what goes on inside kids' brains as they navigate 3-D video- game mazes.

In the June 24 issue of *Nature*, researchers at Brandeis University and the Children's Hospital in Boston report that epilepsy patients produce brainwave patterns known as theta oscillations in direct proportion to the difficulty of the electronic mazes they are trying to solve. These peculiar, slow rhythms have been studied in laboratory animals, but never before linked to specific human behavior. Once scientists understand the mechanism behind such rhythms, they can explore whether modulating the patterns can influence "the speed and quality of learning and memory," says Michael Kahana, an assistant professor of cognitive neuroscience at Brandeis. Kahana collaborated with fellow Brandeis professor Robert Sekuler and Dr. Joseph Madsen, a neurosurgeon.

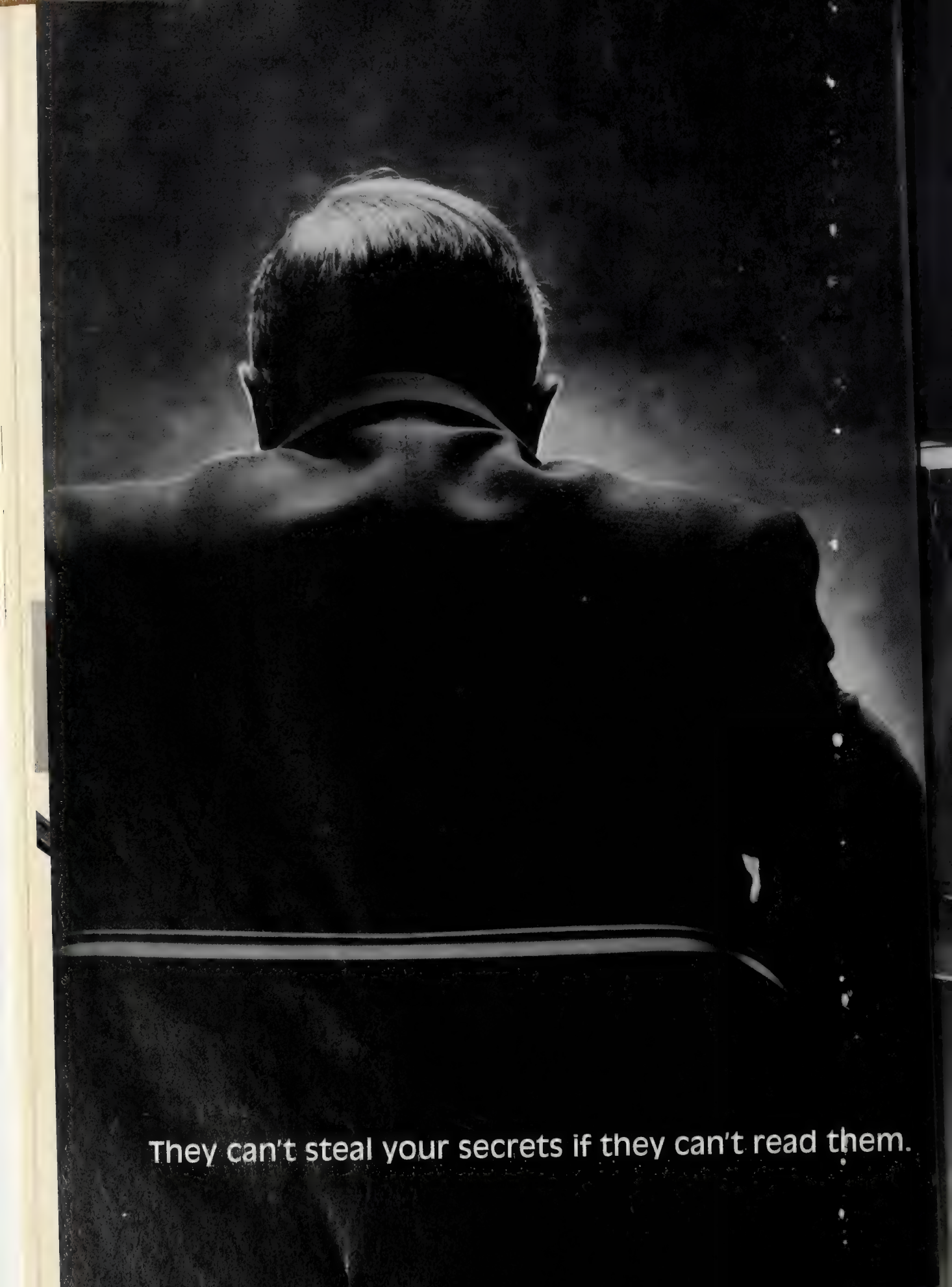
Kahana's research on theta oscillations could vindicate strategies at neuroscience startups such as Scientific Learning Corp. in Berkeley, Calif., which develops games to treat dyslexia and other learning disorders. It is also likely to set off bells at Sony, Nintendo, and other video-game companies, which are starting to target the education market. □

INNOVATIONS

■ Machines are getting bet- ter at reading body language. Massachusetts Institute of Technology and Nissan Mo- tor say they are testing the concept of a car computer that can predict a driver's ac- tions based on a few prep- aratory movements. In simu- lations, the system figured out that drivers were about to change lanes or pass by analyzing just a few seconds of steering, velocity, and ac- celeration data. This could be the basis of a system that warns drivers against risky road maneuvers.

■ Why is the shell of the abalone thousands of times tougher than the calcium car- bonate crystals from which it is made? Scientists at the University of California at Santa Barbara say they have cracked this mystery. Layers of crystals are glued together by unusual proteins that func- tion as tiny, coiled shock ab- sorbers. Under stress, these molecular springs uncoil one at a time to relieve pressure. When the source of stress is removed, they coil back up again. The researchers are considering how this mecha- nism could be applied to create stronger materials for textiles, construction, and aeronautics.

■ Despite nationwide efforts to curb lead poisoning, chil- dren are often exposed to the metal in deteriorating lead paint, contaminated dust, and soil. More than one million Americans have elevated lev- els of lead in their blood. A new study from the San Francisco Veterans Affairs Medical Center and the Uni- versity of California at San Francisco suggests that vita- min C could help when kids are exposed. The study, pub- lished in the *Journal of the American Medical Assn.*, connects lead poisoning with low levels of vitamin C in the blood—though it falls short of proving a causal link.



They can't steal your secrets if they can't read them.

ON-NET VPN SERVICES

They've been called Electronic Terrorists. Cyberspace Spies. And just plain Computer Hackers. But whatever you call them, they cost American businesses an estimated 10 billion dollars last year. As far as we're concerned, that's 10 billion too much.

MCI WorldComSM offers something that's safe, secure and reliable: on-net VPN services. A continuum of virtual private network services that will grow as you grow. One that will work on anything from a Frame Relay to an ATM network to the Internet.

But having a VPN that's customized to fit your business is one thing. Having a VPN that's customized to protect your business is another.

Mind you, we're not simply talking about firewalls, encryption and authentication safeguards. That's the price of entry. We're talking about a far more dramatic line of defense: a single connection. Because only MCI WorldCom owns a seamless global network.* And only MCI WorldCom has UUNET, one of the world's largest Internet networks. Which is why only MCI WorldCom has no middlemen to let your data get lost, stolen or altered.

To learn more about how on-net VPN services can terrorize your Electronic Terrorists, just contact us at www.vpn-on.net. Or, as we like to say in encryption, □□□□□□□□□□

The logo features a stylized star above the text "MCI WORLD.COM" in a bold, sans-serif font.



THE WARREN BUFFETT YOU DON'T KNOW

*Ace stockpicker, of course—
and now, an empire-builder*

BY ANTHONY BIANCO

Warren Buffett is returning to the U.S. from Europe in a private jet. As his plane nears its destination, the flight attendant gives out landing cards and a warning to all eight passengers aboard. "The customs inspector here is utterly humorless," she says, "so no wisecracks or he will tear the plane apart from fore to aft." Buffett, who quips as reflexively as he breathes, takes his card without comment.

In the terminal, a surly looking man with a crewcut and a pistol on his hip sits behind a small table. Buffett hands over his passport and landing card to the inspector, who does not seem to realize that the professorial-looking 68-year-old standing before him is America's second-richest man. Or perhaps he just gets a kick out of trying to take the high and mighty down a peg. "You left some things blank," the inspector says

peevishly. "Do you have \$10,000?"

Cover Story

The question could have launched a dozen snappy retorts, but Buffett restrains himself. "I have what I left with," he says carefully. The inspector furrows his brow—was that some kind of joke?—but does not press the issue. He asks Buffett if he has any anything to declare. "I was given two books," Buffett says. "Well, you have to put it down, then," snaps the agent, who fills in the blank himself.

Buffett shows not a flicker of annoyance at being treated like a misbehaving child. He stands mute and impassive before the inspector, who, after a few more curt remarks, can think of nothing else to do but let "the Oracle of Omaha" be on his way.

Has there ever been a less pompous billionaire than Warren Edward Buffett? Hollywood might cast him in the role of an amiable teacher at a Midwestern college or a sweet-tempered, wisecracking inventor who eventually wins a Nobel prize and gets the girl besides. To hear Buffett sing his beautifully artless rendition of *Ain't She Sweet* to his own ukulele accompaniment is to wonder not only how such a man came to measure his net worth in billions but also whether he might not be a time-traveler from a more innocent age.

If Buffett had a business card, it would identify him as chairman and chief executive of Berkshire Hathaway Inc. But he is far better known—indeed, world-famous—as the greatest stock market investor of modern times. The figures, though often cited, still astound: Had you put \$10,000 into Berkshire when Buffett bought control of it in 1965, you'd have \$51 million now, vs. just \$497,431 if the money were invested in the Standard & Poor's 500-stock index.

The numbers don't lie, but the story they tell is out of date. Buffett has not added a major position to Berkshire's bulging stock portfolio since amassing 4.3% of McDonald's Corp. in 1995. In the meantime, he has transformed what long has been a sideline at Berkshire—the acquisition of entire companies—into the main event. Over the past three years, Berkshire has spent \$27.3 billion to buy seven companies in industries as disparate as aviation, fast food, and home furnishings. The \$22 billion purchase of reinsurer General Re Corp., which closed late last year, was Buffett's largest ever.

The effect has been dramatic: In short order, Berkshire has been transformed from a closed-end fund in corporate drag to a bona fide operating company. At the start of 1996, the company's famous stock portfolio accounted for fully 76% of Berkshire's \$29.9 billion in assets. But by the end of 1999's

first quarter, the figure had plummeted 32% as assets quadrupled, to \$124 billion.

Today, Buffett's company employs 47,566 workers, up from 10,000 in 1995.

And he isn't done yet. "I'd love to make a \$10 billion acquisition, and we could go bigger than that if we like the company," says Buffett, who holds \$15 billion in cash and is sitting on top of an additional \$30 billion in realized gains in Berkshire's stock portfolios.

It's all there in black and white in Berkshire Hathaway's famously literate annual reports, but somehow the company's transformation has gone not just unheralded but unnoticed. Berkshire is "possibly the most talked about and the least understood company in the world," contends Alice Schroeder of PaineWebber Inc. insurance analyst who in January published one of the few comprehensive studies of the company ever undertaken by a brokerage house.

MISUNDERSTOOD. The common view is that Berkshire fetches a premium because of Buffett's reputation as a day Midas. The "Buffett premium" undoubtedly is in the sense that if the man died today, the stock would rise tomorrow. In Schroeder's view, though, Berkshire's stock is trading at a sizable discount to its true value, which she estimates at \$91,000 to \$97,000 per A share. The A shares have been trading at about \$70,000. The basic premise, Schroeder says, is that the world continues to misperceive Berkshire as little more than the sum of the stocks it holds in its \$37 billion portfolio. In other words, the market tends to overreact to news about the seven stocks that form the core of Berkshire's holdings (table). Over the past 12 months, Berkshire has fallen by about 17%, from a high of \$84.37 in June, 1998. In Schroeder's view, the main cause of this decline is the plunging value of Buffett's colossal stakes in Coca-Cola Co. and Gillette Co.

The radical recent shift in Berkshire's corporate strategy does not reflect a radical change in Buffett's thinking. In most ways, he remains true to the conservative precept of value investing. In essence, Buffett continues to prefer the sure thing to the next big thing, no matter how spectacular its potential. Forget Internet stocks: Buffett still will invest in even such well-seasoned high-tech companies as Microsoft Corp. or Hewlett-Packard Co. because he does not believe that anyone can predict how much they will rise over the next decade or two. "I can't do it myself," he says. "And if I don't know, I don't invest."

Even in his stock-picking heyday, Buffett preferred owning businesses to passive minority investment. Until recently, though, Berkshire's acquisitions have been few and far between because Buffett insisted on buying top-quality businesses at discount prices. What has changed is that he is willing to pay a premium for one-of-a-kind businesses.

Why this is so is not completely clear. The Buffett portfolio is notoriously labyrinthine. "I could easily spend a lifetime trying to analyze Warren if I didn't consciously try to," says Olza M. Nicely, CEO of auto insurer GEICO Corp., one of Berkshire's largest subsidiaries. "There are certain things you just have to accept."

In Buffett's view, he is putting the finishing touches on a masterpiece. "Berkshire is my painting, so it should look the way I want it to when it's done," he says.

In an era in which most CEOs at least mouth the platitudes

"Berkshire is my painting, so it should look the way I want it to"

Anatomy of the Berkshire Empire

*What do candy, corporate jets, and earthquake insurance have in common?
Nothing—except that each caught the eye of Warren Buffett*

IT MADE HIS NAME AND HE BUYING STOCKS...

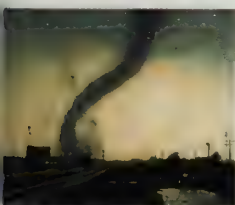
STOCK	COST MILLIONS	VALUE* MILLIONS
COCA-COLA	\$1,299	\$13,400
GILLETTE	600	4,590
AMERICAN EXPRESS	1,470	5,180
FREDDIE MAC	308	3,885
WELLS FARGO	392	2,540
WALT DISNEY	281	1,536
WASHINGTON POST CO.	11	999
Others	2,683	5,135
TOTAL	7,044	37,265

*As of 12/31/98

DATA: BERKSHIRE HATHAWAY'S 1998 ANNUAL REPORT

is nearby

T NOW, HE BUYS COMPANIES, MAKING SHIRE A BONA FIDE OPERATOR



ophes are a specialty

NCE

s Buffett's original
ce businesses.
in reinsurance
natural disasters.
\$1.3 billion
g profit: \$4 million

AL RE*

U.S. reinsurer.
d in 1998.
(1997): \$8.3 billion
t: \$968 million



argest U.S. auto
Partially owned
976; fully acquired
6.
\$4 billion
profit: \$269 million

SEE'S CANDIES

San Francisco-based
maker of boxed chocolates.
Acquired in 1972.

Revenue: \$288 million

Operating profit: \$62 million



*The candy maker has the
same chief it had in '72*

HOME FURNISHINGS

Includes discount retailers
Nebraska Furniture Mart
(Omaha), acquired in
1983, R.C. Willey
Home Furnishings
(Houston), acquired in
1995, and Star Furniture
(Salt Lake City),
acquired in 1997.

Revenue: \$793 million

Operating profit: \$72 million

SHOE MANUFACTURING

Includes H.H. Brown,
acquired in 1991, and
Dexter, acquired in 1993.

Revenue: \$500 million

Operating profit: \$33 million

*Boots
for the
working
man*



SCOTT FETZER

Manufacturer and
distributor of industrial
and consumer products,
including Kirby vacuum
cleaners, *World Book*
encyclopedias, Quikut
knives, and Campbell
Hausfeld air compressors.
Acquired in 1986.

Revenue: \$1 billion

Operating profit: \$137 million

DAIRY QUEEN

Licenses and
services 5,900 Dairy
Queen stores na-
tionwide, as well as
a smaller number of
Orange Julius and
Karmel Korn outlets. Ac-
quired in 1997.

Revenue: \$420 million

Operating profit: \$58 million



*Buffett likes products that
are elementally appealing*

FLIGHT SERVICES

Includes FlightSafety,
the No.1 independent
provider of training to
operators of aircraft and
ships, acquired in 1996,
and Executive Jet Aviation,
No.1 in fractional-share
ownership of business jets,
acquired in 1998.

Revenue: \$858 million**

Operating profit:

\$181 million**



Top-flight training

BUFFALO NEWS

The last remaining daily
newspaper in Buffalo, N.Y.
After acquiring it in 1977,
Berkshire immediately
started a Sunday edition.

Revenue: \$157 million

Operating profit: \$53 million



*Share-
holders
love Bors-
heim's*

JEWELRY

Includes fine jewelry retail-
er Borsheim's (Omaha),
acquired in 1989, and
Helzberg Diamond Shops
(Kansas City, Mo.),
acquired in 1995.

Revenue: \$440 million

Operating profit: \$39 million

*Only 11 days of Gen Re's results were included
in Berkshire's 1998 financials

**EJA results from Aug. 7 to yearend, 1998

"Woodstock for Capitalists"

In May, some 15,000 devoted shareholders flocked to Berkshire Hathaway's three-day festival of an annual meeting



▲ **MEET THE PRESS** Reporters from all over the world descend on Omaha in hopes of catching a quip from the master



▼ TOUR TIME

Checking out a mockup of subsidiary Executive Jet's airline-size business jet

▼ FREEBIES

The Coca-Cola booth draws a crowd

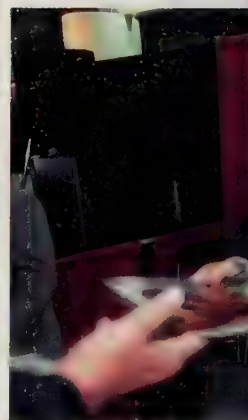


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▲ PARTY BEFORE THE

Buffett with daughter
A. Buffett, who is on the



of good corporate governance and shareholder rights, Buffett, in his good-natured way, is a throwback to a time when a mogul was a mogul and did as he damn well pleased. "Berkshire is the company I wanted to create. It's not the company Alfred P. Sloan wanted to create. It fits me," he says. "I run it with our investors and managers in mind, but it is designed to fit me." To be blunt, Buffett stands revealed as a driven, even monomaniacal corporate empire-builder.

For all his offhand charm, Buffett is pretty much all business all the time. Aside from an addiction to luxury air travel, he is a man of simple tastes and frugal habits. He neither spends his money nor gives much of it away. Philanthropy, the renaissance vogue of America's superrich, interests him peripherally at most. Buffett intends to take his fortune to the grave—and to keep adding to it until the day he dies. "The problem I've got with doing anything else except what I'm doing is that there is nothing remotely as fun as running Berkshire," he says. "I'm selfish that way."

So far, Berkshire's legendarily devoted shareholders would not have it any other way. In May, some 15,000 of them

flocked to Omaha to sit at the feet of the master during Berkshire's three-day festival of an annual meeting, which Buffett calls "Woodstock for Capitalists." Of course, Buffett and wife, Susan T. Buffett, are the largest Berkshire shareholders by far: Their 38.4% stake is worth about \$40 billion.

The highest circle of management power at Berkshire has always been tight, but it has shrunk in recent years to Buffett alone. Charles T. Munger, Buffett's longtime chairman and business alter ego, continues to enliven the annual meeting by playing the part of drolly laconic sidekick to Buffett's ebullient master of ceremonies. Behind the scenes, though, his influence has waned. "Charlie and I don't talk anymore," acknowledges Buffett, who says he did not bother to consult his vice-chairman before making the epochal Gen Re acquisition.

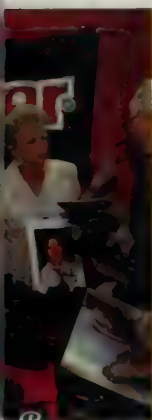
By all accounts, including their own, Munger and Buffett have not fallen out. But while Buffett is wholly devoted to building Berkshire, Munger, 75, now spends his time chairing a not-for-profit hospital and serving as a trustee of a private high school. "Charlie is broader in his interests than I

"There is nothing remotely as fun as running Berkshire"



MAN

Buffett and
partner Charlie
Munger's
relationship has waned



▲ **HAPPY CAMPER** Buffett signs a shareholder's shirt

◀ **SELL THAT SPARKLE** Jeweler Borsheim's does boffo business



▲ **PARTNERS** Buffett's wife, Susan T. Buffett, is also on the board

◀ **UPHILL HIKE** Dexter is one of the few Buffett bets that haven't paid off

▼ **OUT IN FRONT** The Buffett Foundation's support of family-planning services, including abortion providers, draws protestors to Gorat's, Buffett's favorite steakhouse



Buffett says. "He doesn't have the same intensity for Berkshire that I have. It's not his baby." Munger concurs: "Warren's whole ego is poured into Berkshire."

In mid-April, Buffett led a small entourage on a whirlwind European tour to promote one of Berkshire's latest acquisitions, Executive Jet Aviation. I went along for a ride (on one of EJA's Gulfstream IV-SP jets) and got an unusual chance to observe the notoriously press-shy Buffett close range against a kaleidoscopic backdrop of private jets, luxury hotels, and banquet halls stretching from London to Frankfurt to Paris.

Buffett survived a demanding regimen of midmorning press conferences, two-hour luncheons, 90-minute press conferences, four-course banquets. "I never get tired," he told reporters in London, "except for my voice." Actually, Buffett shined with fatigue midway through the third day but soldiered gamely on, answering even the lamest questions with the expansiveness and wit the fifth time he heard them did the first.

Only once did Buffett show annoyance. During a press conference at the Frankfurt airport, Richard Santulli, EJA's usually understated chief executive, let his admiration of Buffett overflow. "People say that he's the most astute investor of the 20th century," he said. "I say ever."

Buffett, who was sitting at Santulli's side, gave a little shrug. "Why not?" he said sourly. "I'm sitting right here."

Like any mogul, Buffett has his special needs. On this trip, he indulged two of them, listed here in reverse order of importance: red meat (at lunch and dinner) and Coca-Cola (all the time).

Whenever I lost track of Buffett, Coke often appeared to guide me—a carbonated version of the proverbial trail of crumbs. In London, our party went from airport to hotel in separate cars. When I arrived at the Berkeley Hotel, I did not have to wonder for long whether Buffett had preceded me. A bellhop approached with a shopping bag. "Is this yours?" he asked. Inside were two six-packs of Cherry Coke. Two days later, I was in the crowded lobby of the Schlosshotel Kronberg near Frankfurt, following a white-gloved waiter bearing aloft a single bottle of Coca-Cola on a silver tray.

Buffett bought Executive Jet in mid-1998 for \$725 million. Although this is a pittance compared with what Berkshire paid for General Re, the EJA deal was no less a milestone in its way. EJA, which pioneered the fractional ownership of business jets, is the first true emerging-growth company that Buffett has ever owned. What's more, the very idea of investing in business aviation would have been considered downright sacrilegious throughout most of Berkshire's history.

For years, Buffett mocked corporate ownership of jets as a wasteful executive perk. But in 1986, he bought a small used plane for Berkshire, then traded up to a more expensive model a few years later. He named the jet "The Indefensible" and made sport of its purchase in his 1989 report to share-

holders: "Whether Berkshire will get its money's worth from the plane is an open question, but I will work at achieving some business triumph that I can (no matter how dubiously) attribute to it."

The truth is, Buffett had fallen in love with his plane but could not yet admit it. In 1995, he was introduced to Santulli by the head of one of Berkshire's operating companies and bought a one-quarter share of a Hawker for personal use. His wife, who has become a frequent flier, called the new plane "The Richly Deserved." (Not to be outdone, Buffett renamed Berkshire's jet "The Indispensable.") Santulli offered to sell his company to Buffett when Goldman, Sachs & Co., a founding minority investor, began pressuring him to float a public stock offering.

Executive Jet in no way resembles the sort of business on which Buffett cut his teeth as an apprentice to the late Benjamin Graham, co-author of the value-investing bible, *The Intelligent Investor*. Graham's method emphasized creating a "margin of safety" by investing only in stocks trading at two-thirds of net working capital. He called them "cigar butts"—companies the stock market had discarded but that still held a puff or two of value to extract.

Buffett was Graham's most accomplished disciple. But as the pupil established himself, he began to feel constrained by the mentor's method. For Graham, a business was an abstraction wholly defined by a set of numbers on a page; he had no interest in its products, its management, its personality. But Buffett's boundless curiosity and enthusiasm were not satisfied by the ghoulish exercise of profiting from the last dying gasps of derelict companies. Buffett's yearnings and dissatisfactions did not begin to coalesce into an investment philosophy of his own until he met the blunt-spoken Munger in 1959. The two, closely matched in intellect and outlook, quickly became the closest of partners. Munger urged his friend to leave the cigar butts in the gutter and think of value in more expansive terms. Says Buffett: "Charlie kept pushing me back to the idea that what we really needed to own was the wonderful business."

Even so, it took Buffett a long time to tailor Graham's straitjacket conservatism to the more generous dimensions of his own personality. His \$11 million purchase of Berkshire Hathaway in 1965 was a costly case in point. Initially, Buffett saw the floundering old-line company as a classic Graham play. But then the textile manufacturer rallied unexpectedly, and Buffett sank more money into it on the belief that this cigar butt had a future after all. It did indeed, but not in textiles.

Buffett did not come fully into his own until he and Munger collaborated on the \$25 million acquisition of See's Candies in 1972. The San Francisco maker of boxed chocolates was the first business of any sort for which Buffett paid more than book value—three times book, in fact.

What, in Buffett's view, makes a business wonderful? It

starts with "a sustainable competitive advantage." Underline sustainable. But not invest in a business unless he feels reasonably certain much it will earn over the next 20 to 25 years. But in Buffett's cerebration, he does not feel truly comfortable if a business ties into his own everyday experience. Favorite companies tend to traffic in elementally apt brand-name products that Buffett not only uses himself but also invests with almost totemic meaning: a bottle of Coca-Cola, a Gillette razor blade, a box of See's candy, and even a Gulfstream jet.

Buffett has always been especially partial to companies that can sustain a competitive edge without tying up much capital. Consider Scott Fetzer, which makes a variety of industrial and consumer products, including Kirby vacuum cleaners and Quikutz knives. Since 1986, when Berkshire paid \$100 million for Scott Fetzer, its earnings have risen by over 100% a year on average. Yet Buffett repeatedly has praised the company as a model of capital efficiency. In 1998, Scott Fetzer netted

\$112 million after taxes on equity of \$86 million. That is all the more breathtaking considering that Buffett has been milking it for 12 years, extracting more than 100% of its value.

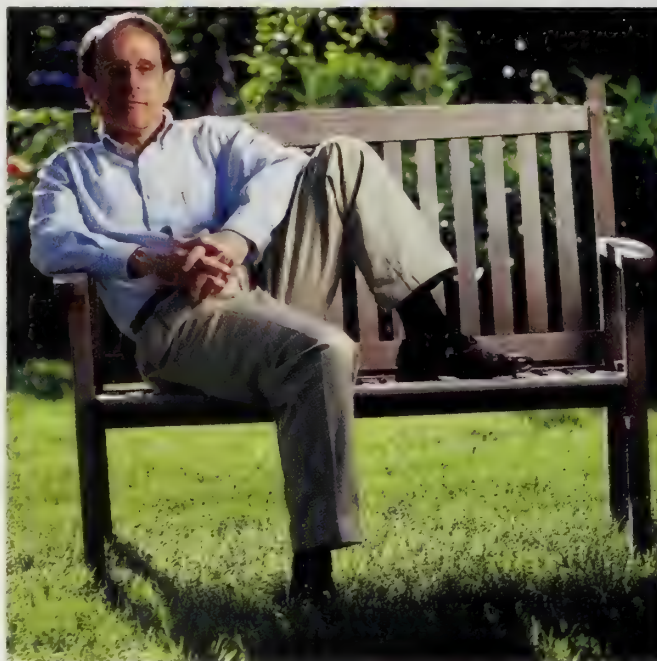
Ever since Berkshire's 1967 acquisition of National Indemnity Co., insurance has held double the weight in Buffett's portfolio. Not only does it like the economics of the business—or parts of it—anyway—but a well-known writer also generated a steady flow of low-cost investment dollars, or so it seemed as a matter of course. In 1996, the acquisition of the now the sixth-largest auto insurer, doubled Berkshire's float at one stroke, and the Gen Re buyout tripled it, to \$21 billion.

In Buffett's view, the quality of a company's management is integral to its value as a business, and when acquiring companies,

Buffett is as concerned with the motives of the selling company as he is with their abilities. "What I must understand is whether someone will continue to get out of bed in the morning and say they have all the money they could want," Buffett says. "Do they love the business, or do they love the money?"

No less an authority than John F. Welch, CEO of General Electric Co., considers Buffett a superb judge of management talent. Buffett and Welch have gotten to know each other over the years as golf partners and as rivals in auto insurance and other businesses. "Take 20 people you know quite well, but Warren has just met casually," Welch says. "If you ask Warren his opinion about them, he'll have each one rated. He's a masterful evaluator of people, and that's the big job there is in running a company."

In 34 years, Berkshire has never lost an operating chief to death. In fact, the great majority of its subsidiaries are still run by the same executive who brought them to Berkshire in the first place. The operating head of its longest tenure is Charles N. Huggins, who has been president



BENCHED Ex-McKinsey consultant Michael Goldberg essentially functioned as COO from 1981 to 1993. Now, he handles special projects

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See's Candies since Buffett acquired it. Huggins is 74 years old now, but he's not Berkshire's oldest manager. That would be 85-year-old Harold Alfond, who founded Dexter Shoe Co. in 1956 and sold to Buffett in 1993 for Berkshire shares now worth \$1.5 billion.

Berkshire's operating ranks contain a second octogenarian billionaire: 82-year-old Albert L. Ueltschi, chairman and CEO of FlightSafety International Inc., a pilot-training concern Berkshire bought for \$1.5 billion in 1996. An ex-pilot, Ueltschi founded the company in a LaGuardia Airport hangar in 1951. "I'm like Warren," says Ueltschi, who has no plans to retire. "I like what I do so much that I don't consider it work."

Somewhere between Frankfurt and Paris, Buffett gets up and walks back to the airplane's pantry to fetch a box of Swiss Sprungli chocolates an admirer had given him in Germany. Buffett makes his way slowly up the aisle of the plane in his shirtsleeves, offering the candy to each passenger aboard.

A half-empty box of See's chocolates rests on the table where I'm sitting. Buffett pops a piece in his mouth. I ask him whether he thinks he could identify See's in a blind taste test against other brands. "Of course," he says. "I can also tell Coke from Pepsi. The thing is, most Americans prefer Pepsi to Coke because it is 4% sweeter, but Coke still outsells Pepsi by a huge margin."

As Buffett continues in this vein, he starts staring at the box of Sprungli he carries. He shifts it to one hand as if he were about to choose a piece, then seems to change his mind. "It's a showy sort of candy, isn't it?" he says and then falls silent. He gazes rapidly at the Sprungli for a full 45 seconds as the conversation continues around him. Then he abruptly sets the box down and returns to his seat without a word.

Later, I recount this to Chuck Huggins, See's president, who chuckles knowingly. "Yeah, that's Warren. Brand-loyal."

The office next to Buffett's is occupied by Michael Goldberg. A former McKinsey & Co. consultant, Goldberg was hired in 1981 to bring order to Berkshire's far-flung insurance interests and essentially functioned as chief operating officer for the next 11 years. The single-minded intensity Goldberg brought to the job created friction in the ranks—and gave him a bad case of burnout. In 1993, Buffett reassigned Goldberg to "special projects" and eliminated his old position.

The line managers who once reported to Goldberg, now 53,

have reported directly to Buffett since—as do the chiefs of all 22 of the companies that Berkshire acquires run their businesses as before, except that he requires them to transfer excess cash to Omaha and clear capital-spending plans with him. Buffett, who thinks of his role as Berkshire's "capital locator," collects the enormous cash flow that the subduces—\$13.4 billion last year—and uses the money to more businesses, either in whole or in part, through the stock market.

Buffett tends not to initiate contact with his operating executives: He waits for the phone to ring. "Let me hear about any bad news as soon as possible," he tells hisordinates, "but otherwise be free to

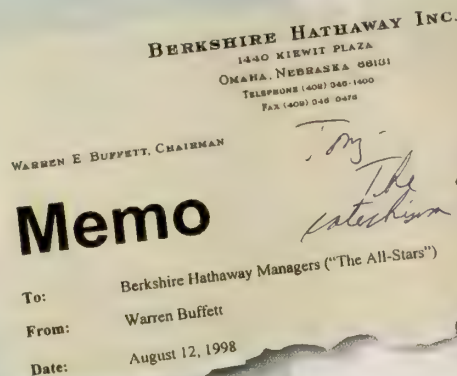
Talking to the Troops

There's no Berkshire Hathaway corporate manual. Instead, Buffett sends out folksy letters from time to time reminding his troops of Berkshire's corporate ethos. Here's an excerpt from a recent one:

The Executive Jet merger has been completed and General Re will likely be merged in the fourth quarter. Therefore, it's now a good time to set forth the few rules we have and also to again ask you about the succession situation at your operation.

Here are a couple of things to keep in mind:

- ▶ We can afford to lose money—even a lot of money. We cannot afford to lose reputation—even a shred of reputation.
- ▶ All of you do a first-class job in running your operations with your own individual styles. We are going to keep it that way. You can talk to me about what is going on as little or as much as you wish with only one caveat: If there is any significant bad news, let me know early.
- ▶ Look at the business you run as if it were the only asset of your family, one that must be operated for the next 50 years and can never be sold.
- ▶ If you run into any owner or managers of larger businesses that might be prospects for a merger, be sure to send them along to me.
- ▶ One group don't send to me: People who are looking for a speaker at any kind of function.
- ▶ Send me a letter updating your recommendations as to who should take over tomorrow if you become incapacitated tonight. Anything you send me will be confidential.



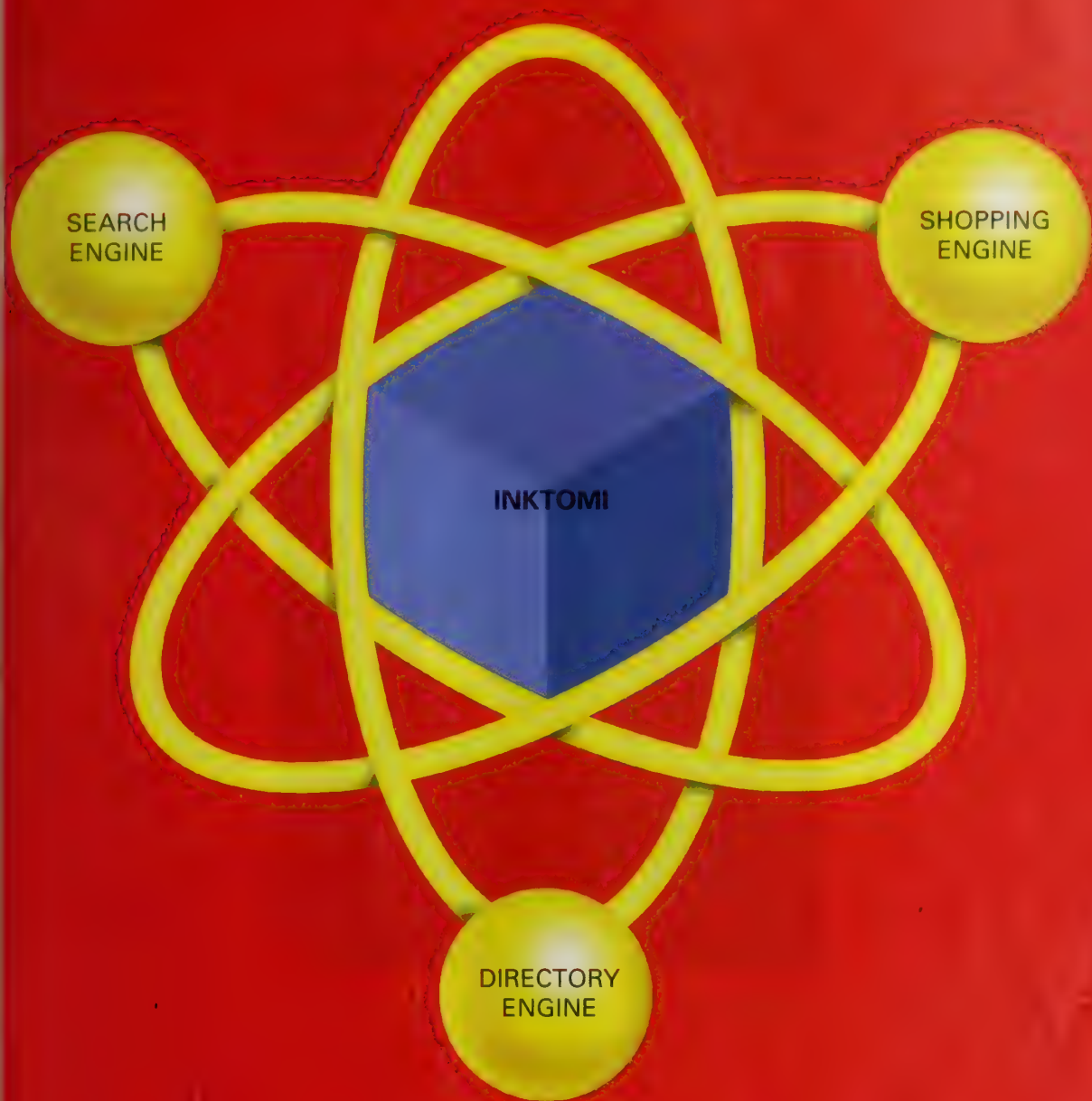
call me often or as seldom as you like." Buffett's managerial passivity should not be taken for indifference. Senior operating chiefs say he never memorizes the monthly reports they send to Omaha. During holiday seasons, Buffett requests daily reports from See's and Heim's, Berkshire's huge scale jeweler in Omaha, cause the ebb and flow of retailing hold an enduring fascination for him. Year-round he speaks to two executives most every day: Richard Tull and Ajit Jain, who run Berkshire's reinsurance business in Stamford, Conn.

Berkshire's homegrown insurance group offers a variety of property-and-casualty coverage in certain U.S. mar-

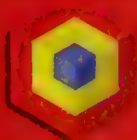
kets. But its chief business is a high-risk, high-reward specialty that Jain developed over the past decade in reinsuring "super-catastrophes"—earthquakes, hurricanes, floods, and such. Buffett found the economics of "super-cat" seductive. Berkshire has made at least \$865 million pretax in underwriting profits since 1991. But it was the complexities of analyzing super-cat risk that hooked him. Says Jain, 47: "Warren and I might have had a 30-second conversation or a minute one, but he has been involved in every piece of business I have done."

As for Santulli's business, Buffett is intrigued not just by the novel challenges posed by EJA's rapid growth but also

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logistical complexities of the fractional-shares business. "He likes the mental challenge of it," says Santulli, a former mathematics professor. "He calls it 3-D chess." Even so, Buffett is careful not to impinge on Santulli's operating authority. EJA's chief once asked Buffett for advice in making a decision and was rebuffed. "Don't bother with that," Buffett told him. "Just decide."

Buffett's laissez-faire management style has been tested most severely in recent years by Berkshire's misadventures in shoes. From 1991 to 1993, Buffett laid out \$650 million to buy three old-line makers of midprice shoes: H. H. Brown, Lowell, and Dexter. In essence, he was betting that his companies would benefit as the appeal of imports waned and U.S. consumers returned to home brands. Buffett hasn't made many fundamental strategic errors, but this was a doozy: Imports now account for 95% of domestic shoe purchases, vs. 70% in the early 1990s. Since 1994, operating profits of Berkshire's shoe group have plummeted 57% on an 18% decline in revenues.

Dexter has fared much worse than Brown, which absorbed Lowell and has buoyed itself by shifting much of its production offshore. Although Dexter now does some manufacturing in Puerto Rico, it has placed overriding emphasis on maintaining full employment at its four factories in its home state of Maine. By all accounts, Buffett has played no part in this divergence in basic strategy—and performance—between H. H. Brown and Dexter except to countenance it by his silence. "It's amazing how little he bothers you," says Francis Rooney, chairman and CEO of H. H. Brown. "He never even comments."

The deference Buffett shows Berkshire's subsidiaries is all the more remarkable because it does not come naturally to him. "With almost every one of the companies Berkshire owns, I think I would do something different if I was running them—in some cases, substantially different," Buffett says. The reason he doesn't impose his views, he adds, "is simply that I am not inclined to make myself unhappy. I sort of accept things as they come."

It's not that simple. Buffett knows the sort of self-motivated, hands-on exec he covets wouldn't tolerate being pushed around by Omaha. And Buffett's respectful treatment of his managers has instilled in them an ambition to "make Warren proud," as one puts it. "Somehow, Warren has been able to keep a diverse cast of characters working harder for him than they did for themselves," Goldberg says. "I see it every day—and I still don't know how he does it. But I do know that all of us feel this incredible responsibility to him."

We arrive late to Paris, touching down in a freakish, near-gale-force windstorm that both thrills and alarms our pilot. In four cars, we race as fast as rush-hour Paris traffic allows from Le Bourget to Dassault Aviation Group's magnificent

19th century château—famously known as Le Rond Point—on the Champs Elysées.

EJA is the largest commercial customer of Dassault, Europe's leading manufacturer of business jets. Sergio Marchionne, the company's chairman, is hosting tonight's reception and dinner in Buffett's honor. By the time we enter the reception is in full swing. But Buffett takes a few minutes into the foyer and hustles up a flight of stairs. It will be good 35 minutes until he descends and joins the party.

Downstairs, the guest of honor's whereabouts is TMI among Dassault's distinguished guests. It might puzzle you to learn that Buffett is on a transatlantic call to one of his employees. The matter he is discussing with Ajit Jain is not urgent. But it is Buffett's custom to speak with Jain every evening. If that means keeping 200 of the world's richest people waiting, c'est la vie.



HIGH RISK, HIGH REWARD Ajit Jain runs the reinsurance business, specializing in "super-catastrophes." Buffett talks to him every day

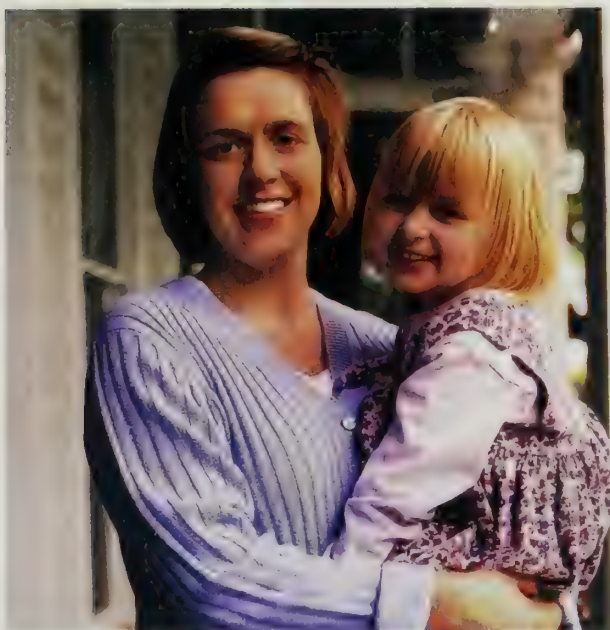
In mid-May, Buffett attended a panel on Internet commerce at Microsoft's annual summit in Seattle. As I tell it, the assignment reeks of William H. Gates III's sense of humor. But the Microsoft chairman and CEO, a friend of Buffett's since 1991, says no joke: "Every principle Warren holds about business and business value will still apply in this new world we're moving into." Gates, who has Berkshire stock in his personal account, adds that he has learned more about business from Buffett than from anyone else. "People really underestimate what he has created at Berkshire," he says.

Unlike most megacorporations, Berkshire was not created on the foundation of a single great business. But it began with a dying textile mill and parlayed its declining cash flow into ownership of a massive portfolio of

duringly profitable operations. By the end of 1998, Berkshire had amassed shareholder equity worth \$57 billion. This is a staggering achievement, putting Berkshire well ahead of General Electric, Microsoft, and every other U.S. corporation and ranking it second in the world to Royal Dutch/Shell Group. Buffett could retire tomorrow and be confident of his place in business history not only as stock investor extraordinaire but as a corporate builder of the first rank.

LIMITS OF SCALE. Instead, of course, he is still in the game, pitching, to borrow one of the baseball metaphors that so fascinate him. From 1965 through 1998, Berkshire's book value per share rose 24.7% a year on average—trouncing the 12.9% average annual gain in the S&P 500. For some time now, Buffett has warned that the company's sheer bulk will prevent it from matching its breathtaking historical average in the future. His avowed goal is to increase its worth at an average of 15% a year. It's a modest aspiration only by comparison; it implies adding \$58 billion of shareholder equity over the next five years.

Except for the shoe group, Berkshire appears to be in fine fettle. Executive Jet is by no means its only hope



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growth. GEICO, Berkshire's largest subsidiary in terms of revenue, has been wresting market share from rivals at an impressive rate and yet still has only 3.5% of the vast U.S. auto-insurance market. Like EJA, Gen Re is planning to expand in Europe and around the world. At the same time, Borsheim's, Scott Fetzer, See's Candies, and other Berkshire companies are experimenting with E-commerce. "The No. 1 topic Warren and I talk about now is whether retail selling is going to move over to the Internet," says Ralph E. Schey, Scott Fetzer's chairman and chief executive.

The pursuit of accelerated growth carries added risk. In 1998, Berkshire had a banner year, posting a 48% increase in net earnings, to \$2.8 billion, on revenues of \$13.8 billion. But net income dropped 25%, to \$541 million in the first quarter, largely because of earnings declines at GEICO and Gen Re. While both insurers were hurt by intensifying price competition, a German subsidiary of Gen Re's also took an embarrassing \$275 million pretax loss on a workers' compensation pool. The down quarter did not seem to faze Buffett, who is famous for taking the long view.

If Berkshire were in fact a painting, it would look like a Jackson Pollock: an idiosyncratic product of inspired improvisation. In building his company virtually from scratch over the past quarter-century, Buffett conjured no overarching strategic vision, followed no master plan other than to buy good businesses at the right price. Even when he erred—a rare occurrence—he enfolded his purchases in an embrace intended to be permanent. "We buy everything, even a stock, with the idea that we will hold it forever," he says.

It is hugely important to Buffett that his corporate handiwork outlast him. In fact, it is his hope that Berkshire—his masterpiece in progress—survive him in exactly the form it exists upon his death, like a painting framed and hung on a museum wall. But might there not come a time when his successor might be smart to sell some of Berkshire's weaker units? "I don't think so," Buffett says. "I hope whoever follows me would behave pretty much as I would if I were to live forever. I feel I owe it. I owe it to the people who sold me their businesses. They didn't have to sell to me. If I die tonight, I want them to get what they were expecting."

MYSTERY HEIRS. Buffett says he already has picked a successor—two of them, actually: one to manage the stock portfolio, the other to oversee the operating companies. Their identities have not been disclosed to shareholders or, for that matter, to the heirs apparent themselves, because Buffett reserves the right to change his mind. He says he might eventually settle on a single successor.

Munger, who has most of his own billion-dollar net worth in Berkshire stock, professes optimism about the company's post-Buffett prospects. "The corporate culture of Berkshire

is more durable than that of the average corporation. That will go on," Munger says.

"The one place a death will hurt us is we're not likely to be as good an allocator of capital as Warren in the near future, whoever that is. But it will still be one hell of a business."

In a company as decentralized as Berkshire Hathaway, operating businesses need not suffer an immediate loss of momentum from Buffett's passing. On the other hand, it is clear that a holding company with a grand total of 100,000 employees can be said to have a corporate culture. Without doubt, Berkshire's operating chiefs are united in their admiration of Buffett and his principles. But most of them barely know one another, and none is remotely Buffett's equal in terms of breadth of knowledge or personal authority. With its challengingly eccentric mix of businesses and its loose, informal structure, Berkshire Hathaway fits Buffett to a T but will prove unwieldy for lesser mortals—especially one so strained by loyalty to Buffett's preservationist credo.

The outlook for Buffett's personal fortune is no less

uncertain. His wife is his heir, but she is 67 years old and might not outlive him. Buffett has three children: Susan, 46; Howard, 44; and Peter, 41. Howard and Peter are directors of Berkshire, but none of the Buffett progeny is involved in the management of the company.

FAMILY PLAN. Buffett has said that it is his wish that 90% of the money he has made eventually go to the Buffett Foundation, to be distributed for worthy causes under the direction of Allen Greenberg, the ex-husband of his daughter Susan A. Buffett. Greenberg works out of a one-person office in the same building that houses Berkshire. The foundation was set up in the 1960s but operates with a scanty endowment. Currently it disburses \$11 million to charity a year, with the bulk of the funds going to grants that provide family-planning services, including abortion. When the foundation comes into its full endowment, it is likely to rank as the world's largest philanthropy.



GOOD GAME Buffett heads for the dugout. He's a big winner, but how many innings remain for Berkshire's legendary leader?

Buffett is often criticized—privately, to be sure—for being a tightwad. But he insists that he is holding tight to Berkshire stock not out of greed but out of a desire to ensure that control of the company passes to his heirs. "I think I could control it with as little as 1% of the stock," Buffett says. "With 35%, my wife could carry on, but with 1%, I'd view it as a tragedy if someone whose achievement was issuing the most junk bonds or having the stock price take over the company and all that we've built evaporated."

It would indeed be a tragedy in the classical sense that the specialness of Buffett's great gifts contains the seed of his empire's eventual undoing. For just as no one other than Buffett could have created Berkshire Hathaway, so may well come a time when no one other than Buffett can make it work.

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ON THE SICK LIST

Nursing homes, Street darlings of the '90s, have been laid low

The nursing-home business, once a thriving industry, needs a good dose of intensive care. Just last year, the seven leading publicly owned companies had a market capitalization of \$35 billion. Now, they're worth less than \$5 billion. Some may not survive.

In the past few weeks, trading in Vencor Inc., the country's sixth-largest nursing-home operator, has been suspended by the New York Stock Exchange. One of the reasons, says the NYSE, is that Vencor's restructuring will leave its stock with "little, if any, value." The stock of the second-largest nursing-home operator, Sun Healthcare Group Inc., will be suspended by the NYSE next week for failing to meet financial requirements. Although it has been spending money on the construction of a corporate office building, Sun recorded losses of over \$700 million in 1998, precipitating significant corporate layoffs. Meanwhile, Mariner Post-Acute Network Inc., with \$2 billion in revenues, "could be headed for possible bankruptcy," according to Andrew A. Gitkin, a PaineWebber analyst. Mariner does not comment on rumors, says a spokesperson.

LOOPHOLE. The companies' stocks reflect the carnage. Most are down over 90% in the past year, with some issues trading below 75¢. Losses for the group during the first quarter of calendar 1999 were about \$160 million. Losses are expected only to get worse over the next few quarters.

How did these companies end up in such shambles? In the early 1990s, this least glamorous of industries, which represents 8% of the health-care industry, stumbled on what Wall Street saw as a



FADING SUN: The nursing-home operator's stock is being suspended

bonanza. As cash-strapped hospitals began sending their sicker patients to nursing homes, operators of those facilities turned to a Medicare loophole unique to nursing homes. In effect, there were no reimbursement caps on treatments such as respiratory, physical, and occupational therapies. So when it was discovered that "rehab" or "ancillary" services could produce 30% margins, Wall Street jumped on the sector, producing a spate of initial public offerings. In 1993, right-out-of-the-box offerings were quickly trading at 20 times earnings.

In that lush environment, says Daniel E. Straus, former CEO of Multicare Cos., a chain of nursing homes sold to Genesis Health Ventures at the industry's peak, "a lot of nursing homes bet the ranch by leveraging up." Lured by the rich margins, nursing homes became hot properties.

But the timing couldn't have been worse. To cut soaring costs, Medicare instituted a new policy consisting of a daily price cap that in one fell swoop wiped out rehab margins by at least 50%. The blow to the public nursing home companies was catastrophic. "I've never seen an industry hit the wall so quickly," says Straus.

The impact on the privately owned nursing homes, some 80% of the industry, appears to be much less severe. Mom-and-pop operations and not-for-profits tended to avoid the "rehab" game. **"OBSCENE" MARGINS.** Today, the companies are busy instituting big cuts—but they may not come so deep enough. Sun, Vencor, and Mariner are scrambling to renegotiate their payments. But the clock is ticking. Vencor defaulted on its debt in May, and Mariner violated bank covenants in

most recent quarter. Large reings are expected to be anshortly.

try officials blame the governdo some on Wall Street. Theent has "devastated" the nursindustry, says David Tepper, t of Appaloosa, a \$1.5 billion iented fund based in Chatam, ys another health-care analyst, ed not to be named: "The govbeat these companies up. lly, they will just have to hand ys over to the government."

haunt the industry. And it wasn't just nursing-home operators that misstepped; even savvy Wall Streeters got burnt. Apollo Advisors, a leveraged-buyout firm, got into the market at the worse possible moment, merging three nursing-home companies within two years with a debt-to-capital ratio of over 90%.

"They made a big bet in the sector right before the sky came crashing down," says Gitkin. "They combined three companies together—two of which were very questionable... The sum of the three parts actually equalled zero."

figure out how to pay himself."

Not all nursing home companies have such bleak stories. Those that stayed away from towering leverage and the rehab businesses, such as HCR Manor Care Inc. and Beverly, are in the best shape today. But the going will be tough for the others. "The government has basically eliminated the get-quick-rich games," says Andre C. Demitriadis, CEO of LTC Properties Inc., a health-care real estate trust.

But there could be a ray of relief after this generally sorry story. The rea-



"The prices they were charging were obscene and, in certain instances, flew in the face of the intent of Medicare's program. It abused the system"

INTENSIVE CARE?

Most of the publicly owned nursing-home stocks have taken big hits

	STOCK PRICE (6/22/99)	DECLINE FROM 6/22/97	
VENCOR	19¢	-99%	Overpaid for two acquisitions
SUN HEALTHCARE	34¢	-98	Expanded at the wrong time
MARINER POST-ACUTE	56¢	-96	A collection of three ailing companies
GENESIS HEALTH VENTURES	\$4.31	-86	Ill-timed acquisitions
INTEGRATED HEALTH	\$8.31	-78	Jumbled foray into disparate businesses
BEVERLY ENTERPRISES	\$7.68	-53	Focused, had good foresight
HCR MANOR CARE	\$25.50	-25	Best operator in the group

DATA: BUSINESS WEEK

ome experts blame greed in the , complaining that rehab services uly are a device to gouge the gov- t. "Those margins should never isted in the first place," says "The prices they were charging obscene and in certain instances he face of the intent of Medicare's . It abused the system."

cally, companies that refused to the loophole were punished by reet. Says Boyd W. Hendrick- o of Beverly Enterprises Inc., gest nursing-home company in ntry: "We did it differently than ppetitors, who indicated they ay whatever they had to to buy g-home bed in order to market y products... [People] didn't at they had to pay." Not surly, Beverly's earnings multiple ly about 12 in 1996, only about t of its competitors.

now, the high-priced acquisitions er excesses are coming back to

The nursing-home game has also fea- tured examples of lavish compensation. Take Robert N. Elkins, chief executive and founder of Integrated Health, whose stock has tumbled 78% since June, 1997. That year, he made over \$14 million in compensation, a Lou Gerstner-type pay package—but without the performance. Elkins still gets corporate loans to buy stock which he doesn't need to pay back if he stays on for five years. And 50% of his annual bonus is paid in advance each year. To top it off, he has a separate retirement trust to which Integrated must make "irrevocable" payments, so that by 2001 the trust will hold \$23.9 million. Elkins refused to be interviewed for this article.

"Integrated looks like a company out of control," says compensation expert Alan Johnson, managing director of Johnson Associates Inc. in New York. "The company's financial problems, he helped create. It seemed like he tried to find every conceivable way to

son: demographics. The cohorts of indi- viduals 65 and older are expected to grow to 79 million by the year 2050, compared to about 34 million today.

STILL A VALUE? Some nursing-home investors are now poised to help revitalize the industry. Joseph K. Piper, a partner with Seattle-based venture-capital fund Integra Bio-Health, which specializes in investments in the health-care industry, sees a new chapter for nursing homes.

"We're looking for entrepreneurs who have a fresh view of how nursing-home services can be provided," says Piper. He hopes to create nursing homes that are smaller and homier. And through better technology, operators will spend less time on paper work and more time with patients. "For the dollar spent, nursing homes are still a very good value," says Piper. "It's a fantastic industry," adds Straus.

Maybe. But meanwhile, the industry needs a heavy dose of rehab.

By Debra Sparks in New York

COMMENTARY

By Marcia Vickers

4.71 REASONS WHY DECIMALS WOULD BENEFIT THE MARKET

In a recent, informal BUSINESS WEEK poll, 87% of those surveyed said they are glad that the U.S. securities industry must switch to decimalization of stock prices by July of next year.

It's about time. France switched from fractions to decimals way back in 1795. Spain switched in 1848. At the beginning of 1974, only the U.S. and Canadian stock markets and Yemen's currency were still fraction-based. Yemen, however, wised up and joined the ultra-hip decimalization ranks later that year. The Canadian market capitulated in 1996.

The securities industry has clung to the arcane fraction system for this simple reason: It allows a greater spread between bid and ask prices, benefiting market makers and specialists at the expense of investors. In effect, it's an artificial pricing system that the industry has an interest in keeping in place. "It's great this is finally happening for investors," says Steven M. H. Wallman, a former Securities & Exchange commissioner who worked with Congress on a bill mandating decimalization.

TICKER SHOCK. Currently, the securities industry is deciding exactly how to implement decimalization. "Each market maker will determine what their minimum price increment, or tick size, is," says Scott Abbey, chairman of the Securities Industry Assn.'s decimalization committee. For instance, some could decide to go with a dime, others a nickel, and others a penny. If a market maker goes with a penny, the bid could be as low as \$5.01, for instance, and the ask could be \$5.02. If it's a nickel, then the bid could be \$5.05 with the ask \$5.10. "The agreement with Congress and the SEC is that it has to be stated in dollars and cents—that's all that matters," says Abbey. But with exchanges and ECNs (electronic com-

munications networks) entering into a heated battle for trades, experts say that competition should ultimately render the penny the standard increment.

Penny increments would be the most cost-effective for investors. They would certainly be an improvement over the current $\frac{1}{8}$ th (6.25¢) increments. For example, if an investor now places a market buy order,

San Francisco investment strategist.

Sure, a penny spread may not prove economical for market makers. If it doesn't, though, bid and ask prices will widen. That way the market, and not the securities industry, will decide for itself how narrow or wide spreads will be. A

brokers that make markets in stocks may accept narrower spreads because they'll make it up in increased commissions from accelerated trading volume. For every 1% decline in trading costs, there's a 2.75% increase in trading volume, according to a study by Ricker. "Bankrupt brokers are as rare as customers' yachts," he says.

The "fraction faction," defenders of the status quo are called on Capitol Hill, cite various reasons why decimalization should be postponed. The primary excuse is that Year 2000 technological fixes are taking precedence. "Decimalization may seem like a trivial change, but it's a huge task in terms of implementation," says Abbey. One legitimate concern for the securities industry is the ability to handle increased quote traffic caused by decimalization.

According to the TowerGroup, a Newton (Mass.) financial-services consulting firm, it will cost the securities industry an estimated \$170 million to update systems for decimalization. Still, it's a relatively simple fix, say experts, and after it's done, the securities industry will be much better off for three reasons: It will be able to compete better globally by using a common pricing language; the resulting increased volume will make the markets more liquid; and investors may be more apt to invest in stocks because decimals are easier to understand. And that's not half (0.50) bad.

Markets & Investments Editor Vickers covers Wall Street.



or bid, for 100 shares of AnyCorp stock that's trading around \$5 a share, he may end up purchasing the stock at, say, $5\frac{1}{8}$ th a share—the lowest incremental price over \$5—even if there are sellers willing to unload the stock at $5\frac{1}{2}$ th. (Some stocks already trade in 32nds or 64ths in deals negotiated between big customers and market makers or in trades executed on some ECNs.) With decimalization, assuming pennies become the minimum tick increment, an investor might be able to purchase that same stock for \$5.01 a share—a difference of 5.25¢. On a 100-share trade, an investor would save \$5.25. That may not sound like a windfall, but take into account the more than one billion shares that change hands each day. Investors could save almost \$1.5 billion annually with decimalization, estimates Jeffrey P. Ricker, a San

COMING SOON: LUXE

Chief Bernard Arnault
ing up Web stakes

were unlikely visitors to the
is headquarters of the LVMH
et Hennessy Louis Vuitton luxu-
s company: three Swedes with a
sell sports apparel from a Web
turing an electronic salesclerk

"Miss Boo." But LVMH
an Bernard Arnault
n hour chatting with the
ly this year, then opened
ckbook and took a stake
London-based company,
n. "He likes our style,"
o.com's 28-year-old Chief
ive Ernst Malmsten.

ault's favorite style is ag-
re. A raider whose \$7.2
a-year empire includes
in Dior and Givenchy, the
man now has his eye on
pace. Since January, he
t more than \$100 million
o-related startups from
to Silicon Valley, ranging
mortgage lending to flower
y—far removed from
gold-plated brands.

SS. So what's Arnault up
e isn't saying, and his
people point out that the invest-
are being made by his Arnault
holding company, not by LVMH.
at may be trying to make a quick
n a hot business. But he also
be positioning LVMH for a push
-commerce, where luxury retailers
cspicuously absent. The knowhow
is from an inside look could give
headstart.

many ways, E-commerce is a nat-
ext step for the restless Arnault,
no in 15 years built the world's
t luxury conglomerate from the
s of a bankrupt textile company. Af-
gting hammered by the Asian eco-
n crisis, he has focused LVMH's ef-

forts on the U.S., where E-commerce is
spreading fastest. One of LVMH's recent
buys, the beauty-products chain Sepho-
ra, is opening 26 stores in the U.S. this
year and is gearing up to sell online.

Even some LVMH power brands could
get into the act. While the Net can never
match the pleasures of shopping in a
Fifth Avenue boutique, ordering a fa-
vorite item online—say, a Guerlain per-
fume—would save a shopper time. De-
signers also could lure customers by
displaying collections on the Web.

This may be an opportune time for
Arnault to make a move. LVMH profits
plunged 29% last year, and Arnault suf-
fered a setback this spring when his
bid to acquire Gucci was blocked by his



VISIONARY? So far, luxury-goods makers
have shunned the Internet

archrival, French billionaire François
Pinault. But LVMH is perking along now,
with sales expected to grow at least
15% this year, to more than \$8.1 bil-
lion. Although recovery in Asia is help-
ing, analysts say Arnault deserves cred-
it for slashing costs at underperforming
units, such as the DFS chain of duty-
free shops. LVMH is now trading at \$295
a share, more than double its low point
last year.

Not everyone thinks LVMH is headed
for the Web. Still, the French tycoon
has never been afraid to think big and
move fast—faster than you can say
"boo.com."

By Carol Matlack in Paris

ARNAULT'S WEB

FINANCIAL SERVICES One of three investors who jointly paid \$300
million for a stake in online brokerage Datek; started Web site for E-loan

RETAILING One of seven investors taking total \$50 million stake in Califor-
nia-based online pharmacy planetRx.com; took stake in 1-800-flowers.com

VENTURES Put \$4.2 million into London-based icollector.com

DATA: BUSINESS WEEK

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MORE BAD NEWS FOR THE WISEGUYS?

New indictments on Wall Street—and now a murder angle

It was a one-two punch against the mob on Wall Street. Punch one came on June 16, when a federal grand jury in Brooklyn handed up highly publicized indictments charging 85 defendants with multiple counts of stock fraud and racketeering. Punch two came the next day in Tampa: a 19-count federal indictment charging five other defendants with stock fraud and racketeering. The little-publicized Tampa indictment was far smaller in scope. But for Wall Street's mob contingent, it was an even more stunning blow.

For one thing, the feds in Florida landed far bigger game than the motley assortment of brokers and alleged mob associates nabbed in Brooklyn. Among the Tampa defendants is Philip C. Abramo, identified in the indictment as a *capo* in the DeCavalcante organized crime family. In a Dec. 16, 1996 **BUSINESS WEEK** Cover Story,



Abramo was characterized by Wall Street sources as one of the most powerful reputed mobsters on Wall Street. Also indicted was Abramo's brother-in-law, Louis Consalvo, who is identified in the indictment as a DeCavalcante soldier. The National Association of Securities Dealers lists Consalvo as the holder of Series 24 and Series 63 supervisory licenses—making him probably the first person ever to simultaneously hold an alleged membership in organized crime and an NASD brokerage license.

Moreover, the Tampa indictment contains a grisly element—murder.

As portrayed in the Tampa indictment, Abramo was the kingpin of an archetypal “pump-and-dump” scheme. He is accused of controlling the New York office of a now-defunct brokerage, Sovereign Equity Management



Defendants allegedly sold vastly overvalued stocks to the public in an archetypal “pump-and-dump” scheme

THE ROLE OF ABRAMO WAS REVEALED IN THIS DEC 16, 1996, COVER STORY

Corp., that allegedly sold vastly overvalued stocks to the public. The indictment names three stocks—SC&T International, Alter Sales, and Total World Telecommunications. SC&T and Alter officials could not be reached. A Total World spokesman says that it has new management and is cooperating with authorities. The companies were not charged in the indictment.

FACING JUSTICE. Sovereign's former chief operating officer, Glenn T. Vittor, was indicted. So was a barred stockbroker named Philip Gurian, who was allegedly a hidden control person of Sovereign—where Consalvo was on the books as a supervisor. Also facing justice in Tampa is a 35-year-old former penny-stockbroker named Barry Gesser, whose palatial home in Bedford, N.Y., was the subject of a color spread in the May 20 edition of *The New York Times*. Identified as a “hedge fund manager,” in the

article, Gesser is described quite prominently in the indictment: He had a central role in the pump-and-dump scheme. Attorneys for Gesser, and Gurian declined comment, and attorneys for Abramo and Consalvo did not return phone calls.

According to the indictment, Gurian & Co. themselves were ripped off, which prosecutors believe led to the murder. The indictment says that in February, 1996, \$1.7 million was transferred out of an account Abramo allegedly controlled in the Bahamas. The following December, a Bahamian woman who was a nator on the account, Joy Cartright, was murdered in her sleep by gunshot wounds to the back of the head. At a hearing for Abramo on June 22, Federal Bureau of Investigation agent Kelly Thomas testified that Bahamian police concluded, after an “exhaustive investigation,” that the money's disappearance was the motive for the murder. However, the indictment does not allege complicity of the defendants.

The indictment does allege that the Cartright murder was later used as an object lesson. It asserts that last year Gurian told a Total World spokesman that if he told the truth to the public, “it would end up like Joy Cartright.”

Gurian could not be reached for comment. Indeed, the feds say they had trouble reaching Gurian and Assistant U.S. Attorney Kevin March says Gurian has yet to submit to authorities. One FBI agent involved in the case says that Gurian “has fled” and is now an international fugitive. Gurian's lawyer declined comment on the client's whereabouts.

Gurian, of course, may simply be a bit slow in getting his affairs in order. That's understandable—he and the other defendants face up to 20 years in prison if convicted. The potential sentence is a far cry from the civil penalties and wrist slaps that often faced securities crooks in the past. Perhaps that's as persuasive as a couple of bullets to the back of the head. But an object lesson nevertheless.

By Gary Weiss
in New York

MENT DILEMMA

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How Compuware mishandled its explosive sexual-harassment case

It was spring of 1998, and Peter Karmanos Jr. was sitting on top of the world. A fireplug of a man with a piercing gaze and iron handshake, the then-55-year-old co-founder, chairman, and chief executive of Compuware Corp. had built it into a \$1.1 billion purveyor of computer software and services. Sales were soaring, earnings were fat, and Wall Street loved him.

Moreover, the hometown boy was revered around Detroit for his community involvement and philanthropy. Thanks to his 12% stake in Compuware—now worth \$656 million—Karmanos had given millions to cancer research. And, realizing a lifetime dream, he even owned a National Hockey League team, the Carolina Hurricanes.

But things soon started to sour. On May 20, at Compuware's regularly scheduled quarterly meeting, the usually convivial Karmanos turned somber, according to several directors present. Karmanos sadly told his board members that one of the company's highest-ranking officers had complained he had sexually harassed her. Sheila McKinnon, the company's senior vice-president for human resources, the board was about to learn, had told other executives that Karmanos twice suggested she engage in an extramarital affair with him, that Karmanos allegedly rubbed her leg at a social event and on a company plane, and that he later turned hostile and abusive when she spurned his advances. "I don't know how to handle this," Karmanos said to the board, according to a later deposition. "I'm hurt, I'm upset, I'm confused, and I don't know what to do."

SHOCK AND DISBELIEF. It was an intensely awkward moment for the board, which includes Elizabeth A. Chappell, a former AT&T vice-president, former Connecticut Governor and U.S. Senator Lowell P. Weicker Jr., and G. Scott Romney, son of the former Michigan governor. Suddenly, they were confronted with perhaps the most difficult, sensitive problem a board can face. Worse, McKinnon, 52, was not only a member of Karmanos' inner business circle but also a close friend of his and his wife, Debra's.

Equally troubling, McKinnon claimed

NO WAY TO TREAT A CRISIS



A TROUBLED INQUIRY

APR. 6 '98 Compuware CEO Pete Karmanos learns that Sheila McKinnon, the company's senior vice-president for human resources, is alleging that he sexually harassed her. Karmanos denies the allegations. With his approval, Compuware hires lawyer Anthony J. Rusciano to investigate.

APR. 10 Rusciano learns that McKinnon believes her claims will be supported by Troy Strong,

Karmanos' former administrative assistant. Strong has also alleged harassment by Karmanos.

APR. 16 Strong alleges that Denise Knoblock, an executive vice-president, advises her to stay out of the McKinnon matter. In a deposition, Knoblock doesn't recall this.

APR. 29 Acting on behalf of Rusciano, Knoblock attempts to question Strong about her harassment allegations. Strong refuses to answer, saying she wants a lawyer first. Rusciano, in his report, says Knoblock told him

that Strong doesn't want to get involved. He calls

MAY 1 Karmanos tells Strong to his of Strong alleges that he tried to influence Knoblock's testimony. Karmanos estimates that, saying he was trying to find out what was going on." Strong returns to his cubicle; she alleges Karmanos then and put Rusciano on line. That day, Strong contacts an attorney

MAY 2 AND 3 Strong calls Karmanos at his home three times over the weekend but does not



a number.
call,
has not yet
attorney.
wer.
block tells
testimony is
eded. Rus-
his probe
viewing her.
Karmanos tells
McKinnon's
General
ello presents
Rusciano's
cludes that
ident support
n's claims"
ud after inter-
people,

including Strong. The report says Strong denied any harassment. The board agrees McKinnon's employment should be terminated.

MAY 22 McKinnon is fired. Four days later, she files suit against Karmanos and the company alleging sexual harassment and retaliation. Rusciano's firm is soon hired to defend the company.

JULY 10 Rusciano interviews Strong for the first time.

AUG. 10 Strong leaves Compuware.

AUG. 19 Compuware again asks Rusciano to perform an independent investigation, this time into Strong's allegations.

SEPT. 14 Strong files suit against Compuware, charging the atmosphere made it impossible for her to keep working there.

SEPT. 18 Rusciano reports to the board that he "finds no evidence" to independently back Strong's claims.

MAR. 26, '99 McKinnon's suit is settled out of court.

that another woman, Karmanos' former secretary, 36-year-old Troy Strong, was also sexually harassed by him. Chappell recalls the sense of disbelief and gravity that filled the room. "It is a very, very serious subject. I don't care if it's Pete Karmanos or God, we needed to get to the bottom of that," she says.

Yet it didn't take long for Compuware's directors to decide they knew enough. As the board sat silently, Karmanos turned the meeting over to the company's general counsel, Thomas Costello Jr., who presented an 18-page report from an outside investigator hired to look into the allegations. "Although no final conclusion can be reached at this point as to what was actually said between Karmanos and McKinnon when there were no witnesses, there is no independent support for McKinnon's claims," the report said.

INVITING LAWSUITS? Compuware's 11-member board—which is weighted heavily with insiders, the politically connected, Detroit area figures, and others whose companies have done business with the company—began to consider the report. But discussion quickly moved on to McKinnon's job performance. Within 90 minutes, the board reached a consensus to terminate Sheila McKinnon's employ-

ment. "We felt the company had no choice," says board member Romney. "We couldn't tolerate retaining a head of human resources who we believed was fabricating a story."

But by basing their decision to

**ACCUSED: CEO
PETE KARMANOS**
*A V-P and a
secretary
allege he made
unwanted
advances*

fire McKinnon on an investigation of the CEO overseen by his subordinates—and moving beyond the report and into a review of her performance—Compuware's directors appear to have erred badly. Indeed, by failing to take on responsibility for the investigation themselves, the board may have increased the company's vulnerability to lawsuits.

As with all allegations of sexual harassment, those lodged against a CEO can be virtually impossible to prove or disprove. Perceptions of what took place often differ widely. In the ensuing battle to prove who is telling the truth and who is lying, one key point is often overlooked: At base, sexual harassment is about power. And a CEO of a large corporation, by definition, holds enormous power, marshaling vast legal resources in any confrontation. That's why experts in employment law say it is

crucial that when a CEO is accused of harassment, he or she must step back and hand over the matter to the board.

However, a close examination of court records and interviews with Compuware executives, the company's lawyers, and six of Compuware's seven independent directors reveals that both before and after the May 1998, board meeting, Karmanos, his top staff, and their outside investigator, Anthony J. Rusciano, set into motion a troubled investigation that raises as many questions as it answers.

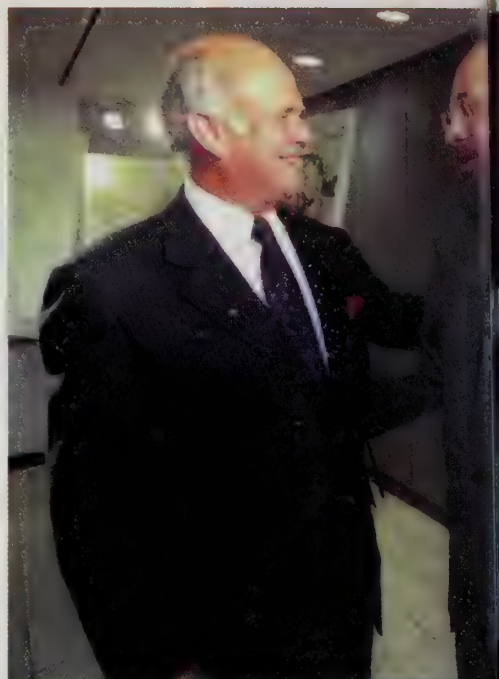
For starters, Rusciano alternated between acting as Compuware's investigating attorney on the case and giving the company advice on how to defend against McKinnon's allegations. He and his firm also have a long-standing business relationship with the company. At least, those ties create the appearance of conflict of interest that is best avoided in such a sensitive case, according to Michael Duffy, former chairman of the Massachusetts Commission Against Discrimination and now a consultant on workplace issues. Moreover, company executives who report to Karmanos—including one cited by both women as a key witness—played a major role in conducting the investigation. Perhaps worst of all, Karmanos injected himself into the McKinnon investigation by talking about it with Strong.

NO REGRETS. General Counsel Costello defends the actions of the board and company. "You do what you think is right, and I think we did. I think our board trusts us; they trust Peter, I know," he says. "A lot of those folks have known me or known Peter for quite a while, and I think they knew we would do things the right way." Compuware's directors also stand by their performance. "I don't think it could have been handled better," says Romney. "If there had been any hint of any merit in this, we might have done something different; there just wasn't any scintilla of any thing."

Yet far from putting an end to the matter, the board's decision set off a chain reaction of bad news. Within four days, McKinnon filed suit against Karmanos and the company alleging sexual harassment

and retaliation. In the wake of the McKinnon case, Strong also left Compuware and filed her own suit against the company for "constructive discharge." In her suit, Strong alleged that Karmanos twice suggested "we need to take the afternoon off and fuss around at a hotel," and that he had touched her inappropriately. Strong's suit alleges that as a result of being dragged into the McKinnon case and forced to provide testimony that would put Karmanos in a negative light, her working conditions became intolerable.

In an interview and in court records, Karmanos denies all the allegations made by both McKinnon and Strong. Says Costello: "In any other business [McKinnon's allegations] would be called extortion." Compuware and Karmanos countersued McKinnon, charging defamation, but dropped the case roughly three months later. Explains Elizabeth H. Tipton, a Houston-based defense attorney hired by Compuware: "We didn't want to be perceived as a bully in front of a jury." The two sides agreed to an out-of-court settlement in April of this year and signed a "non-disparagement" clause. McKinnon declined to be interviewed. Unable to find a comparable job, McKinnon is now working as a consultant,



CITY BOOSTER Schmoozing with... *McKinnon*

says her attorney, Kathleen Strong's case is pending. She left the company in August last year and now works as a management trainer at a Detroit area retail store. "Nobody is concerned about Pete's reputation is ruined. Nobody is concerned about Pete's reputation is ruined," she says. "I do respect him as a business man, but what he did isn't business." Whatever really happened, the episode has been a bitter pill for Karmanos, 56, a proud man who has enjoyed a brilliant career. "You sit

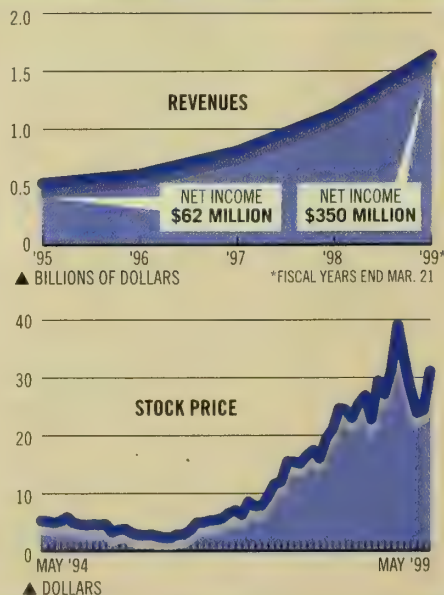
running a company for 26 years, and this," he says in an interview. Karmanos has been the heart of Compuware for as long as anyone can remember. Since pooling his income tax refund with two friends to start Compuware in 1973, he put his personal stamp on every aspect of the computer service software company. Compuware uses its money helping organizations, such as Ford Motor Co. and New York's Metropolitan Transit Authority, get their computer works running smoothly. Under Karmanos, the company has p...

A SUCCESS STORY

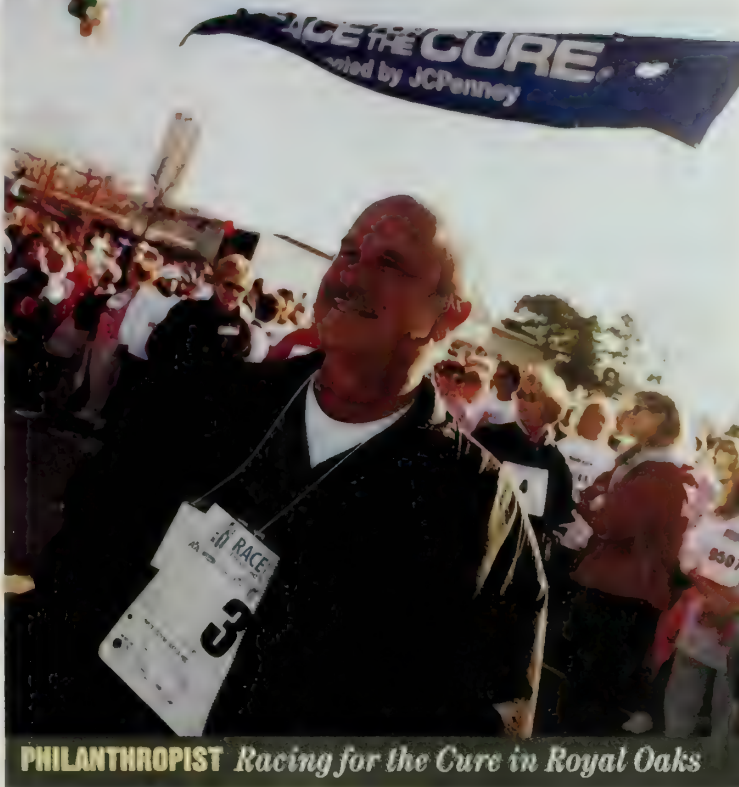


With Karmanos at the helm, the computer services and software dynamo has become a Wall Street favorite. Its specialty: helping companies boost the performance of their mainframe computers and the networks that run off of them.

DATA: BLOOMBERG FINANCIAL MARKETS



The son of Greek immigrants who owned a diner, Karmanos is a local hero, revered for his community involvement and philanthropy



PHILANTHROPIST *Racing for the Cure in Royal Oaks*

higher annual in revenues and higher profit growth past three years, it the No. 6 spot BUSINESS WEEK 50 top-performing companies this spring.

than just a bottom-line guy, Karmanos has won plaudits for Compuware workers a state-of-gym, day-care center, and cafeteria—making Compuware the most sought-after places to the Detroit area. The constant-chewing Karmanos is by most a popular CEO. The son of immigrants who got his first taste of business as a kid waiting tables in a family diner, he prides himself on being a regular guy. Nor is he afraid to have his conversation with loud and blunt remarks. And just two months after Detroit rejoiced when Karmanos decided to move Compuware's headquarters and 6,500 high-skill jobs from the company's lush suburban campus in Farmington Hills to a now-rubble-filled lot in the heart of downtown.

There seemed no limit to what Karmanos could accomplish. But his life became immensely more complicated in 1998. That's when Denise Knoblock, Compuware's executive vice-president for human resources and administration, walked into Karmanos' office. A longtime colleague of McKinnon's, Knoblock had been promoted over McKinnon. "Sheila has been making al-

legations that you sexually harassed her," Knoblock told Karmanos, according to her deposition. Karmanos says: "The first thing I did was call my wife."

Karmanos says his wife burst into tears. A former top-performing saleswoman at Compuware who wed Karmanos in 1990, Debra had become good friends with Sheila since the two met through their husbands, boyhood classmates. The McKinnons were among a handful of couples invited to vacation every summer with the Karmanos family at a condominium on the New Jersey Shore. Back in Detroit, Debra and Sheila often socialized, attending the opera and dinner together and going on "girls-only weekends," according to company documents.

HE SAID, SHE SAID. At first, Karmanos says, "I sat there for the longest time trying to figure out what happened." But a couple of days later, he "decided to deal with it as a businessman." He summoned Costello and instructed him to find someone outside the company to do an independent investigation. With Karmanos' approval, Costello turned to Rusciano, chairman of the board at Plunkett & Cooney, a respected Detroit law firm that had represented Compu-

ware in employment cases.

Rusciano says in his report that he "interviewed 26 individuals" over the next three weeks, including top executives at Compuware and friends of both Karmanos and McKinnon.

According to the report, none of them backed up McKinnon's allegations. Some of those interviewed, in fact, contradicted McKinnon's claims. Friends at the Jersey Shore, for instance, told Rusciano they believed it was McKinnon who was pursuing Karmanos. Pamela Burt, a friend of both couples, told Rusciano that during the trip to the shore in August, 1997, McKinnon was "continually in [Karmanos'] face" and later, in a sworn deposition, she said McKinnon was "acting like a schoolgirl." But there was one very big problem. One of the 26 people Rusciano claimed to have interviewed, he spoke to for "less than a minute." The person was Troy Strong, Karmanos' former secretary, the one person who might have given credibility to Sheila McKinnon's claim.

Three weeks later, at the May 20 board meeting, Costello presented Rusciano's findings to the board as Karmanos sat uncharacteristically mute. In the course of their 90-minute discussion, the board soon turned its attention to questions prompted by the report about McKinnon's job performance. The report, for instance, said Karmanos was concerned that McKinnon "was not telling him the truth" about a study of

pay differences between men and women employees done by consulting company William Mercer Inc. "In Pete's mind, lying about the Mercer study was a big deal," says Diane Prucino, Karmanos' personal attorney, in an interview. From there, the board moved into a wide-ranging discussion of her performance. Board member Elaine K. Didier, a former administrator at the University of Michigan, said senior executives told the board meeting that McKinnon had caused a "breakdown of trust."

Bogas, McKinnon's attorney, disputes that charge. "Sheila denies that she ever lied to Peter or ever misrepresented any findings of any study," she says.

That alleged breakdown was key to the decision to fire McKinnon, says Didier. Yet court documents show McKinnon had performed well since joining the company in 1992 and was respected for her accomplishments prior to the alleged incidents of sexual harassment. She was promoted to senior vice-president in 1996, becoming one of the highest-ranking women executives in the company. In a

sworn deposition, Larry Feespuware's vice-president for facilities described McKinnon as an "energetic and charming" person who transformed the atmosphere in the human resources department from "cold and cautious" to "warm and inviting and friendly." He believes McKinnon was largely responsible for the creation of the fitness center, the day-care center, and the top cafeteria, according to his deposition.

In interviews with BUSINESS WEEK, board members say another reason they agreed to terminate McKinnon was her failure, as the head of human resources, to follow company policy and lodge an official complaint about Karmanos' alleged behavior with her supervisor or the general counsel. Instead, McKinnon "was talking behind his back," says board member Didier. "That just tears at the management team," she says. But the risks involved in making a complaint against a CEO, sexual harassment experts say that it would make sense for McKinnon to discuss her experience informally with a few trusted confidants. "You don't have to be a surgeon to figure out why she did this public with it," says Susan L. Strong, president of Pacific Resources Development Group Inc., a Seattle consulting firm.

SHORT SKIRTS. Had the board known the full extent of Strong's allegations, they may have viewed McKinnon's denials in a different light. Strong alleged troubles with Karmanos started shortly before Christmas, 1996, she says. That's when Karmanos allegedly suggested to her that they go to a restaurant. She says that she ignored the proposition, but that Karmanos repeated about a week later. In an interview in her complaint, Strong alleges Karmanos made other offensive remarks, such as, "Could your pants get any tighter?" and "I want to see you bend over." He also allegedly hit Strong's skirt while she was sitting at her desk and grabbed her buttocks at a Compuware Christmas party. Karmanos denies these allegations in an interview and in a court deposition. He says he once had to tell her that her skirt was too short and too tight for work.

Karmanos characterizes the relationship between Strong and himself differently. He says they simply had a personality conflict and didn't work together. "It was awful," he says. "After a few years, it was the first time in my career that I couldn't get along with somebody." Strong disagrees. "We got along fine until he propositioned me," she says.

Strong, who says she wanted to

INSIDE COMPUWARE'S BOARDROOM

Compuware's 11-member board is weighted heavily with company insiders, the politically connected, Detroit area figures, and others whose companies have done business with Compuware. Noticeably lacking are CEOs of other large public companies.

THE OUTSIDERS

DIRECTOR	JOINED BOARD	DESCRIPTION
BERNARD GOLDSMITH	92	Managing director of investment bank Udata Capital, which has handled M&A deals for Compuware.
WILLIAM GRABE	92	A former IBM vice-president, now managing member of venture-capital firm General Atlantic Partners, which provided venture finance for Compuware in 1989.
WILLIAM HALLING	96	President of the Economic Club of Detroit, the meeting spot for local business and political elite. A former managing partner of KPMG Peat Marwick.
G. SCOTT ROMNEY	96	Son of the former Michigan governor, Romney was a partner at Compuware's outside law firm until resigning in 1998 to pursue an unsuccessful bid for attorney general.
LOWELL WEICKER JR.	96	Former Connecticut governor and senator, now a visiting professor at the University of Virginia. Met Karmanos after he bought the Hartford Whalers, an NHL team Karmanos has since moved to North Carolina.
ELIZABETH CHAPPELL	97	The ex-AT&T vice-president now runs Bloomfield Hills (Mich.)-based consultant Chappell Group Inc.
ELAINE DIDIER	97	Recently left post as interim director of academic outreach at the University of Michigan in Ann Arbor.

THE INSIDERS

PETER KARMANOS JR.	73	Co-founder, chairman, and CEO of Compuware. Current stake: 21.7 million shares (11.8%).
THOMAS THEWES	73	Compuware co-founder, vice-chairman since '88. Current stake: 6.1 million shares (3.4%).
W. JAMES PROWSE	86	Executive vice-president of marketing and communications, Compuware. Current stake: 1.7 million shares (under 1%).
JOSEPH NATHAN	90	President and chief operating officer of Compuware. Current stake: 908,000 shares (less than 1%).

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on Apr. 29, Rusciano dispatched
k to the company cafeteria to
th Strong, according to Rus-
eposition. But Strong refused
r questions, saying she needed
with a lawyer first. In his de-
Rusciano says: "The message I



In 1973,
Karmanos
(center)
and two
friends
started the
company
on \$9,000

kept getting back from Ms. Knoblock
and Mr. Costello was that she just didn't
want to get involved."

Then on May 1, the final day of Rus-
ciano's investigation, came a much-dis-
puted meeting between Strong and Kar-
manos. Karmanos called her into his
office, and according to Strong's deposi-
tion, he said: "You've got to talk to the

lawyer. You've got to tell him that the
reason why you left was we had a per-
sonality conflict and we just didn't get
along; that I didn't sexually harass you."

Crying and upset, Strong says in her
deposition, she went back to her cubicle,
and the phone rang almost immediately.
It was Karmanos, saying he had Rus-
ciano with him, and Rusciano wanted

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with her. Then, says Strong, at on the phone, and said, 'Hi, I talking to Pete. He told me to tell me that you were nev-ly harassed and that the reason left was because you had a city conflict. Is that correct?' Karmanos' account of the May 1 is different. "I didn't coach her to say in any way, shape, or e says angrily. Karmanos says Strong to his office "to find out s going on, because she wasn't back to Tony." Rusciano says d the joint phone call simply as tunity to reach Strong: "I didn't to be told what to say."

Experts, however, insist that as seriously erred. "Whether he se things or not, he shouldn't ng her into his office," says H. Koppes, an attorney at Day, Reavis, & Pogue and a f corporate governance at Stan-University School of Law. Even are attorneys concede it was a e. Says Tipton: "Do I wish that hadn't taken place? Of course." insists Karmanos never tried to Strong's testimony. ay case, Strong said she couldn't

talk to Rusciano at work and asked him to call her at home that evening. Although he says he tried to reach her three times to ask her about Karmanos' alleged harassment, he never reached her. That ended Rusciano's efforts to contact Strong. On Monday, May 4, Strong received a message from Knobbloch saying that the investigation was complete and Strong's participation wasn't needed. Strong says at first she was relieved. "I thought Sheila had changed her mind." Instead, Rusciano concluded in his report, based on what Knobbloch told him, that "Strong denied any such behavior by Karmanos toward her." Strong not only disputes that, she says Knobbloch was the person she first told of her allegations.

It wasn't until July, 1998, that Strong finally told her story to Rusciano, even though his firm was by now representing Compuware in the McKinnon lawsuit. Although he was not the attorney of

Director Romney claims "there just wasn't any scintilla" of misconduct on Karmanos' part

record on the case, Rusciano was providing advice on how to defend the case. But Rusciano and Costello insist that in interviewing Strong, Rusciano was again acting in his capacity as independent investigator. Strong, by this time on medical leave, quit a few weeks later and filed a suit against the company.

Over the next several weeks, Rusciano continued to advise Compuware on the McKinnon case. But by mid-August, Rusciano was back to

wearing his investigator's hat, this time performing a second probe for the board into Strong's allegations. His conclusion: "I find no evidence to independently support or corroborate any of Ms. Strong's harassment or retaliation claims."

It's unclear whether Compuware's board of directors would have reached a different conclusion in the McKinnon case if they had known earlier about the extent of Strong's allegations. But board member Chappell says she had

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no second thoughts after his report. "I know I should say yes, but I didn't. I still believed there was nothing to this."

There may have been other questionable signs worth a closer look. In McKinnon's diary of events surrounding the period of the alleged sexual harassment, she refers to a conversation, dated "1-27-98," in which Knobbloch informed McKinnon of Strong's own allegations of sexual harassment. Four days later, according to the diary, part of the court record, Knobbloch told McKinnon that some syringes containing an impotency drug were found in Karmanos' trash.

In an interview, Karmanos confirms that he had brought "some pre-Viagra

stuff" into his office from home. But he maintains that the syringes were unopened and in their original package and that he brought them to work in order to renew an expired prescription. He then says he threw the drug and syringes into the trash. Knobbloch, who declined comment, concurred with Karmanos' version in her deposition.

Could Compuware's legal mess have been avoided had the directors taken charge of the investigation from the start? Costello says the Equal Employment Opportunity Commission guidelines emphasize handling sexual harassment allegations quickly, and that was why management did an investigation ahead of the board meeting. "If we

wanted something absolutely but yeah, it would be a great idea to separate committee, and not have inside directors there. But then time constraints. We had a board meeting coming up."

But was speed really the problem? There is a lesson for every public company in how the Compuware management and board handled the allegations, experts say. "The question is, who's the client here? The client is not the company, the board," says Day's Koppes. It is a lesson Peermanos and his hugely successful Compuware have had to learn the hard way.

By Joann Muller in Farm Hills, Mich.

COMMENTARY

By Joann Muller

KEEPING AN INVESTIGATION ON THE RIGHT TRACK

So what should a CEO do when he—or perhaps she—is accused by an employee of sexual harassment? First, say experts in employment law and corporate governance, get out of the way. When such explosive charges reach all the way to the top, it's crucial that the board, not the CEO or other senior executives, take control of the matter immediately. Even if a CEO steps back from an investigation overseen by a company's general counsel or head of human resources, no one questioned by his subordinates is likely to forget who is the boss. Workers' fears that the allegations will be swept under the rug—or that any negative comments they make will get back to the chief—risk stifling any probe even remotely linked to the corner office. "It's never an easy decision to come forward," says Michelle Phillips, a specialist in employment law at Jackson, Lewis, Schnitzler & Krupman in New York.

Fairness isn't the only concern; liability is, too. Ultimately, it is the board's fiduciary responsibility to the company and to shareholders to ensure a thorough investigation. That means that once a company's general counsel gets wind of allegations made against the CEO, the course is clear. First, the general counsel must make



the CEO understand that the company's, and ultimately his own, interests will be best served if he limits his involvement in the investigation to simply being a cooperative witness. And at that, the chief executive should be treated no differently from any other witness; showing greater deference to the CEO's views is the fastest way to signal to the whole organization that the probe is not serious.

DIRECTORS SHOULD DIRECT. Second, the general counsel should immediately apprise the board of the allegations and make clear that any investigation should be directed by them. Typically, a board might then set up a committee of two or three outside board members who would be re-

sponsible for quickly hiring an outside investigator. Any report should be presented first to the directors. That way, it will be clear to everyone that the board, not the CEO, is running the show. Says John Nash, president emeritus of the National Association of Corporate Directors and vice-chairman of the Center for Board Leadership in Washington, D.C., "The investigator must personally interview each potential witness privately, and should never rely on hearsay from others. Above all, no executive should be involved in questioning witnesses of the subject of the allegations. The investigation should be done quickly, too, so that charges aren't allowed to fester. In all cases, discretion and sensitivity are critical. 'The first thing to tell the parties involved and the supervisors not to talk to anyone else,'" says Nancy Shilepsky, an employment specialist at the Boston firm of Goulston & Storrs.

If only Compuware and its board of directors had searched out such common-sense advice. They might have resolved the allegations against Pete Karmanos with far less rancor—and far more clarity.

Joann Muller is a BUSINESS WEEK correspondent in Detroit.

ARE

IN RED HAT MAY RED-HOT?

Happy upstart may never be more than a passing fad

Whether it's his slight frame or his low-profile career in the computer-leasing business, CEO Robert F. Young is no giant you would never guess it from the man. Young and his four-year-old company, Red Hat Software Inc., are getting from mighty Microsoft confidential memos, Microsoft lawyers warned Chairman William H. III that Linux, the operating system Red Hat sells, poses a threat to the company's Windows NT software. Red Hat's latest release during the giant's antitrust trial as it faces plenty of competition. No mistake, Red Hat is red-hot. Young has used savvy maneuvers to make the company's work red fedora synonymous with the freebie operating system that experts by capturing 17% of the server market last year. Six giants, including Compaq Corp. and Oracle Corp., have taken minority stakes in Red Hat, according to International Data Corp., it has quickly snared 54% of the x market, vs. 1% share of IBM. Red Hat rival, Novell, is holding in Germany, Germany and 6.3% of the market. Red Hat's system in Orem, Utah, Young has cash in on the hoopla. In the plans to Red Hat public. Computer experts don't think the Durham company will

topple Microsoft. What's more, it's not even clear that the company will be able to transform Linux from a fad into a commercial success. For starters, Red Hat doesn't control Linux, which is a free program that's worked on by legions of developers around the world. So far, the company has made most of its money from retailing \$40, \$80, and \$100 versions of its product, which include an easy-installation feature, a Windows-like interface, and a host of supporting programs. Revenues last year were a modest \$10.8 million—leaving Red Hat with a \$91,000 loss. And it's no wonder: Most of the estimated 7 million copies of Red Hat Linux out

there have been downloaded for free off the Internet or copied legally.

Young's challenge is to persuade corporations and Web-site operators to pay from \$1,000 to \$60,000 a year for technical support—based on the number of users—and even more for services such as customized programming. Services represented only 7% of revenues last year, but the company expects that to grow dramatically. As a sidelight, Young also is turning the company's Web site into a portal providing information for Linux users—and making money from advertising and E-commerce. The business model is complex and unproven, but Young points out that even giants like IBM derive the bulk of their income from services.

Besides, he argues, Red Hat's quirky business model is the best way to avoid a direct confrontation with Microsoft—

HAT IN THE AIR

Despite the excitement over Linux, Red Hat still has major hurdles to overcome:

GETTING USERS TO PAY

Linux is attractive because basic versions can be had for free, and it's reliable. Red Hat has to persuade customers to shell out \$40 for its beefed-up version—plus pay extra for technical support and services.

CRACKING THE CONSUMER MARKET

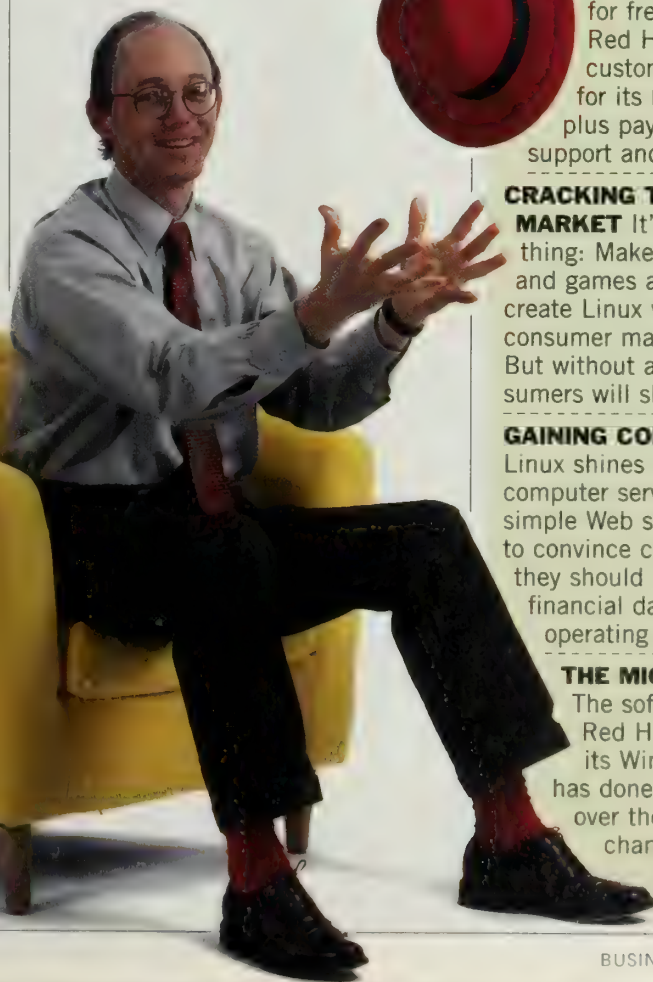
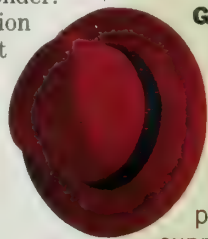
It's a chicken-or-egg thing: Makers of PC programs and games are reluctant to create Linux versions until a consumer market develops. But without applications, consumers will shun Linux.

GAINING CORPORATE TRUST

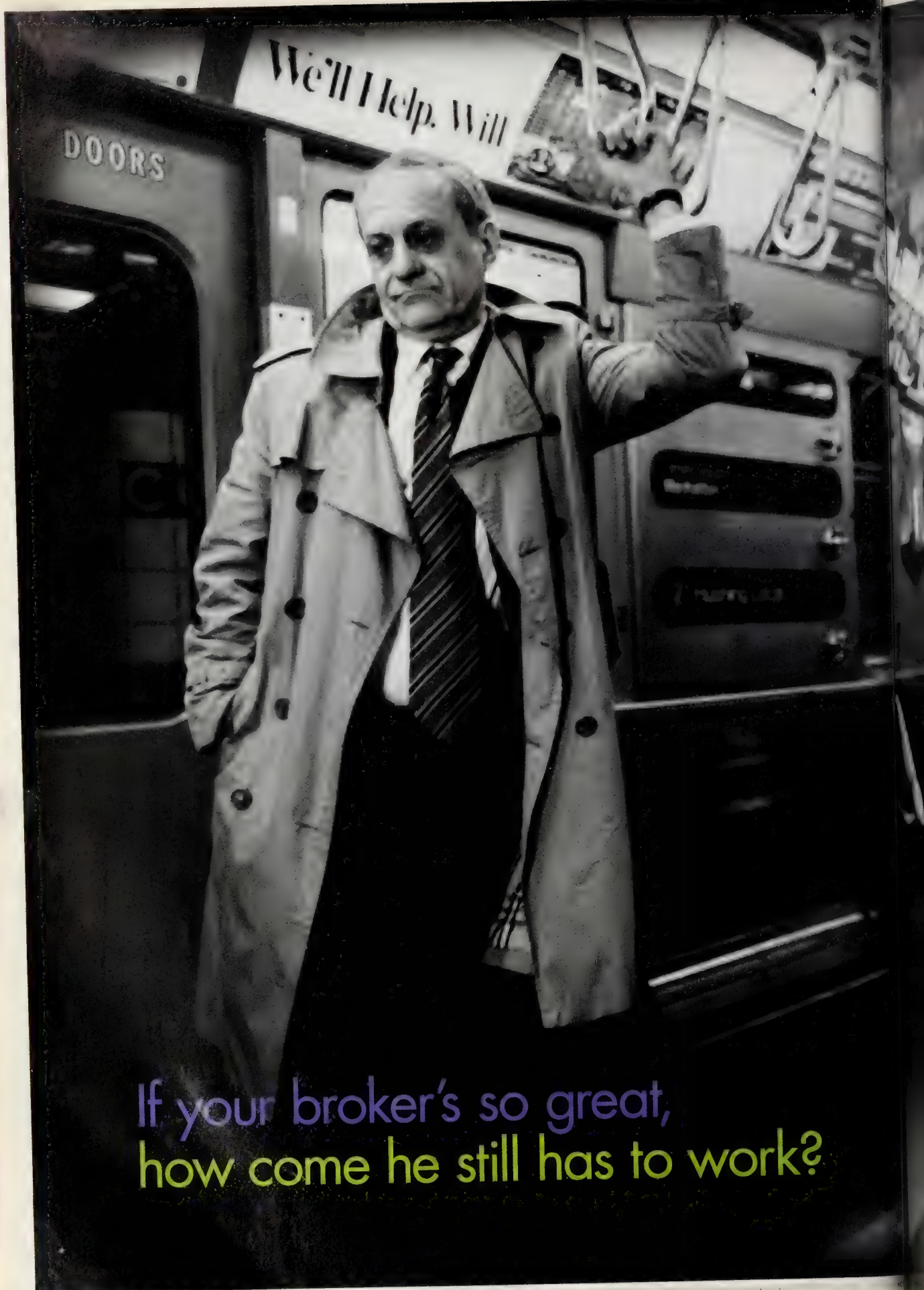
Linux shines when running computer servers that power simple Web sites. But it's difficult to convince corporations that they should entrust their critical financial data to an unproven operating system.

THE MICROSOFT FACTOR

The software giant has held Red Hat up as a threat to its Windows monopoly—but has done nothing yet to run over the upstart. That could change once the antitrust trial is behind the company.



FREEBIE: Getting Linux, a free operating system. Young used a red fedora symbol



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COMPUTERS

with its installed base of more than 200 million Windows users. "You have to change the rules of the game," he notes in an interview before the IPO filing. Young believes that as the Linux movement spreads, corporate users will jump at the chance to regain control of their computer networks from Microsoft. "We're going after an overpriced, static operating system with a higher-quality, better-priced product," claims Young.

That pitch has proved compelling to some users—principally Web-site operators and college students. But analysts give Red Hat no chance of cracking Microsoft's lock on the lucrative personal-computer market. Despite its best efforts to spiff up Linux with a Windows-style interface, it remains an unfriendly program. And few desktop applications like word processors and spreadsheets run on Linux, so consumers aren't apt to switch. "This puts a ceiling on the Linux market," says analyst Daniel Kusnetzky of IDC.

BIG BACKERS. Red Hat's best hope may be selling products and services for servers. According to researcher Netcraft Ltd., Linux accounts for 20% of all server shipments, just six points less than Microsoft's Windows NT. Numbers like that led Oracle—a bitter Microsoft rival—to invest in Red Hat. "We support the leading operating systems, and Linux is emerging as one of those," says Mark Jarvis, Oracle's senior vice-president for worldwide marketing.

For now, all this market share isn't producing much in the way of revenue. Indeed, that may be because Linux' biggest selling point—its reliability—leads corporate users to believe they can run it without paying for support. Red Hat's largest corporate user, Burlington Coat Factory Warehouse Corp., bought 1,250 Linux-based PCs for its 250 retail stores but didn't buy tech support. "We already have enough Unix expertise available in-house," says Michael Prince, Burlington's chief information officer. "In my mind, our experience raises questions whether Red Hat's business model makes sense."

If Red Hat gets past all of these hurdles, it will still face Microsoft. Young shows no fear. Unlike Red Hat, Microsoft's past rivals were "dependent on Microsoft's operating system, so Microsoft had the leverage—and used it," he says. Young would be well advised to remember that the computing landscape is strewn with the remains of companies that underestimated Microsoft.

By Dean Foust in Durham, N.C.,
with Jonathan Drew in Atlanta

BRINGING MAINFRAME MIGHT TO PC SERVERS

After falling way behind, IBM is snatching back the business

When IBM Chairman Louis V. Gerstner Jr. held his annual briefing for Wall Street analysts last year, he was brutally frank about the computer giant's PC server business, a segment of the industry that was fueling spectacular growth at rivals Compaq Computer Corp. and Dell Computer Corp. "We missed this one so badly that I don't even like to think about it," he told analysts. "We let Compaq run out and grab the PC server business." How much did Compaq snatch? Its 38% market share in 1997 was more than triple IBM's.

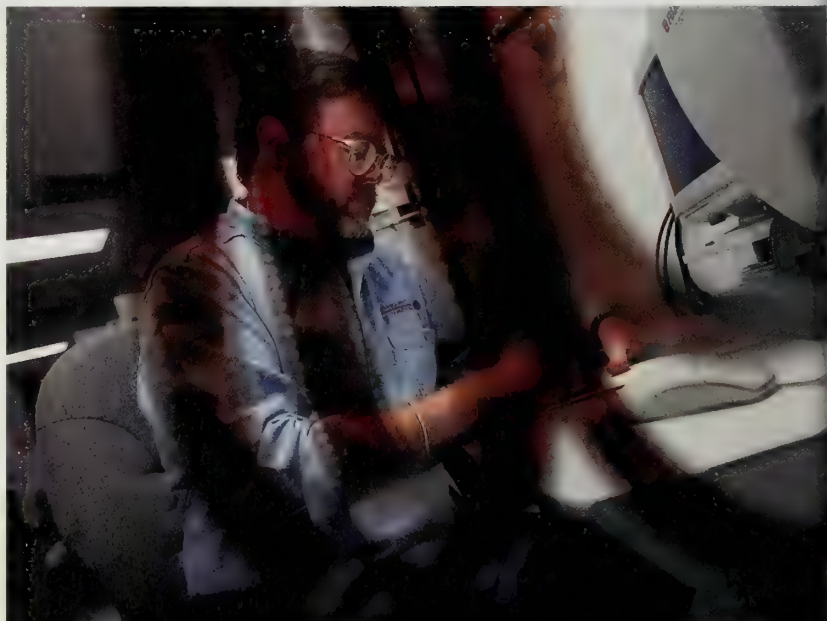
Now, however, Gerstner can hardly contain his glee. "We've got great momentum," he crows. Indeed, for the first time in years, IBM is winning back customers and giving competitors fits. According to market researcher International Data Corp., sales of IBM's Intel-based Netfinity servers are up 63% in the first quarter of this year from the same quarter a year ago. IBM's market share for the same period climbed from 11% to 14%. And, in the past six months, IBM says it has won more than \$50 million in PC server business

with important customers like Chase Manhattan, McDonald's and Kinko's. Even sweeter: In over those deals, IBM says it is replacing Compaq equipment. Concedes McDonnell, a Compaq vice-president: "We have seen IBM come a little bit." But she insists Compaq is losing big time to IBM. "It's a flow," she says.

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It's the flow that IBM has. Intel-based servers for \$1 out of every \$4 spent on computer servers worldwide in 2003, that will be \$1 out of \$2, according to IDC. That's because PC servers are getting more sophisticated and handling a heavier workload. Typically, PC servers connect small groups of users, say a departmental E-mail system or a local files. But as the power of chips has grown, PC servers have the oomph to run such corporate Web sites and complex databases.

That's cutting into IBM's mainframe sales, a \$4 billion business with 60% gross profit margins, a legacy IBM's Netfinity line, on the



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Information Technology

hand, may have 30% gross profit margins, but it's a \$1.2 billion business that grew 100% last quarter. "This is a high-growth market," says IDC analyst Amir Ahari. "The last thing IBM wants is to be blindsided like it was in desktops. They let the PC market slip past them."

Instead, IBM hopes to zip past rivals. To do that, the company has given its PC servers a complete technology overhaul while pumping up its marketing, including spending \$5 million a year just on customer research. The key makeover ingredient: putting the best of its mainframe knowhow and reliability into the smaller, cheaper machines. At the same time, Big Blue has rolled out the red carpet for wary customers, winning over

the likes of Blockbuster Entertainment Corp. and Fuji Photo Film Co. "Whatever a customer is going to spend on [Windows] NT and Intel-architecture products, my mission is to get the most of that we can," says David Thomas, general manager of IBM's PC company.

DOUBLE WHAMMY. Yet as Thomas sets off on his mission, he may find himself facing competitors armed with IBM's own expertise. Indeed, IBM is supplying rivals such as Dell with much of the same cutting-edge technology that is going into its own PC servers. That could be a double whammy for Thomas, since he still has to overcome earlier missteps and convince customers that IBM's servers are much better than a few

years ago, when they were pokey and humdrum.

That's why IBM decided to tiny PC servers mainframe m the summer of 1997, the compu plucked some of its top enginee ent from other computer gro told them to go to work. Now older mainframe cousins, I servers simply refuse to fail. " everything that could happen Frank Governale, vice-president erations at CBS News, which be Netfinity servers. CBS News wa for servers to replace an aging old system, but it wanted machi were ultrareliable. IBM set up, a ty server and had a CBS technic pulling out parts, including th supply and disk drives. The just kept running.

Should something still go a has an answer for that, too. Ev chine has software designed to the entire system, constantly on out for impending failures—be server can crash. The software something is about to go kapu disk drive or power supply, a matically sends a message to an vice center. If the problem can't



*Millions
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IBM: No Longer a Laggard in Servers

In quarterly sales, Big Blue trails Compaq and Dell, but it's gaining ground

	COMPAQ	HP	IBM	DELL
Q1 '98	\$1,090	\$410	\$360	\$340
Q1 '99	\$1,250	\$461	\$580	\$590
GROWTH RATE	15%	11%	61%	73%



repair person is then dispatched to bring a new part. "They're bringing mainframe discipline to the Intel-based servers," says systems analyst Dale Gorman of Bayer Corp., which is replacing Compaq servers. The company will likely have 100 IBM Netfinity servers for e-mail and Notes software.

As technicians arrive, they don't need to turn off the ailing computer to replace the parts. IBM technicians swap or add parts as the machine is running. And on June 1, IBM unveiled a new top-of-the-line server starting at \$80,000 and its latest mainframe-like technology, software that connects up to 64 Netfinity computers, making the servers as powerful as a supercomputer. Says Michael Liebow, chief of strategy for the Netfinity unit, "What we're doing is cherry-picking the best [mainframe] technology and putting it to the Intel space."

MENT. The changes are paying off when Fuji went looking for PC servers to power a mini photo-processing plant plans to sell to retailers, every company gave the standard price quote for hardware—over the phone. But when people first asked to meet with Fuji to find out more about what the company was doing. Then they gave

Fuji managers a tour of IBM's research operation, including a peek at some Internet technology that will help Fuji put its photo-processing system on the Web. The result: a \$4.4 million contract for the servers and a commitment for future E-commerce business. "I thought I was just buying hardware," says Bill Diminno, general manager of Fuji's Commercial Markets Div. "Instead, I'm buying a lot of knowledge."

To be sure, IBM is still No. 3 in server sales: Compaq and Dell remain in the

Hot Add and Hot Plug technology for its servers. Quips Michael D. Lambert, senior vice-president of Dell's Enterprise Systems Group: "They probably make money off us and lose money on desktops and servers."

True, IBM's PC business—which includes PC servers—lost nearly \$1 billion last year. Most of that, however, was in desktop PCs, and analysts expect the business to at least break even this year. IBM's Thomas counters that the numbers don't tell the entire story.

IBM When Big Blue technicians arrive, they don't even need to turn off an ailing computer to replace parts

lead. And while Compaq has been struggling, Dell has been going gangbusters, edging out IBM for the No. 2 slot by increasing its server sales in the first quarter 73%, according to IDC. Moreover, IBM may not be helping its own cause. The company is selling its winning technology to rivals. In April, IBM and Dell announced a deal valued at \$16 billion for IBM chip, storage, and monitor technology that will certainly go into Dell servers. Meanwhile, Hewlett-Packard Co. has licensed IBM's

"A lot of the profits we derive from our PC business show up in other segments [of IBM]," he says. For example, maintenance or services sold along with Netfinity servers are booked as revenue by IBM's Global Services unit. "It's never going to look exactly the same [as Compaq or Dell]," says Thomas. Maybe not. But if Thomas can keep the momentum going in PC servers, then those comments might just fade away.

*By Ira Sager in
Somers, N. Y.*



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Term Life Bargain Day

Competition and the Net have cut rates—but that may not last

BY KERRY HANNON

What costs less than half what it did two years ago? Term-life insurance. Term-insurance buyers have been enjoying some of the lowest rates in history thanks to increased competition and the ability to buy policies over the Internet or the phone without going through an agent.

Let's say you're a 45-year-old man in good health who wants a 20-year, \$1 million term policy with level premiums. Back in 1997, that would have cost more than \$1,800 a year, says Moody's Investors Service. Today, the annual premium can be as little as \$964. But this bargain-hunter's paradise may not last. The National Association of Insurance Commissioners has approved regulations

that would require insurers to raise the rates they set aside to cover claims. Several states have already approved the regulations, and others are expected to follow suit by Jan. 1. To offset the reserve additions, insurers likely will raise premiums and limit rate guarantees. So it

may be time to move now if you're considering buying.

Term-life policies provide coverage for a set period

of even 50 years—without the savings and investment features you'll find in whole- or universal life coverage. Unlike other types of life insurance, you can drop coverage without penalty thanks to toll-free calling and the Net, you have plenty of choices. If you want to review your policy with a live person, you can visit an agent or broker, though you'll pay a commission to

Life Insurance

premium coverage—which guarantees same premium for the life of the policy—is gaining in popularity

you feel confident about shopping solo, direct sales over the phone or Net are the cheapest routes. You might also check out deals through your college or credit-card issuer.

Read the fine print, though. Not all bottom-rate policies deliver on their promise—and while some rock-solid insurers do offer bargain rates, the cheapest rates may come from those that are less financially stable. Moreover, the lowest rates may be available only to a select group of fit-as-a-fiddle folks.

Insurance-quote services and mutual-fund companies such as Fidelity Investments can help you evaluate your options and needs with online calculators. That said, nothing is as easy as it sounds. Different underwriting criteria mean that a 10-year term policy for a 40-year-old male nonsmoker seeking \$1 million in coverage might cost \$10 a year with Midland Life Insurance or at Banner Life Insurance. Some quote ask a handful of queries, while others piled questionnaires that ask, for example, you've been convicted of driving under the influence in the past 10 years or used tobacco in the past five. Ultimately, what you pay depends on a mandatory physical exam and lifestyle factors: Are you a passionate scuba diver, don't exercise the lowest rate. A hazardous hobby could double your premium or keep you from coverage.

Figuring out how much insurance you need is easier than estimating rates. The rule of thumb is to buy enough for 5 to 10 times your annual income. But what you need will also depend on your income, the number of your dependents, your own wealth. Once you figure out how much coverage is right, evaluate the type of policy you need. Be sure to check out multiyear term policies. A relatively new product, level-term policies will pay the same premium for the life of your policy. Last year, some 40% of new policies guaranteed a set rate for 20 years or more, compared with none in 1995, according to

Insurance.com. Level-term policies are becoming the cover choice. Locking in a flat rate eliminates the risk of rate hikes and future health screenings is a benefit for aging boomers. Buying a level-term policy now will also protect you if your health declines. But that rate will cost you: A 10-year, \$1 million level-term policy for a 38-year-old female non-

smoker in fine health may cost around \$500 annually. A 20-year policy would cost \$740. Always check the fine print to see if your level premiums are guaranteed. An insurer may be able to hike rates for an entire class of policyholders. And some 10-year policies might guarantee rates for only 5.

Your rates could jump after that if you have a medical problem.

You should also shop for convertibility, which lets you switch your term policy for more expensive whole- or universal-life coverage without another health exam. Insist on a policy that doesn't restrict the conversion period to the first few years of the term. Whole life stays in effect until age 100; universal lets you designate how much of your premium should go toward insurance and how much for investments.

MORE FOR LESS. Second-to-die insurance is worth considering, too. A second-to-die policy on a husband and wife doesn't pay off until both have passed on. Second-to-die term insurance provides cash to pay taxes on your estate and protect your children or other heirs. Since premiums are based on two life expectancies, they are typically cheaper than those on policies covering one person.

Your choice of beneficiary is critical. Most people select a spouse. But if you opt for a child, things can get tricky if the child is a minor when you die. In that case, you'll want to name a trustee to accept the insurance payout and administer it until the child turns 18. As a policy owner, you'll need to pick a payoff method as well. The common options are interest income only, installments for a fixed period, or an annuity.

Always check an insurer's financial stability. Buy from companies with the highest ratings from Standard & Poor's, A.M. Best, Duff & Phelps, Moody's, or Weiss Group. Once you hold a policy, check the insurer's rating with at least two agencies annually. Your bargain-priced policy will be little consolation if your insurer won't be around to make the payout if you die. □

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Term Insurance Tips

- Buying via a Web-based service may mean a lower premium if you know precisely what you want. If you need hand-holding, an agent is worth an initial meeting to get you up to speed on what your needs might be.
- Before buying, be sure the insurer is financially sound. Look for ratings of AAA, AA, or A++. Each rating service has a different system. Check with A.M. Best (908 439-2200, www.ambest.com); Duff & Phelps (312 368-3157, www.dcrco.com); Moody's Investors Service (212 553-0377, www.moodys.com); Standard & Poor's (212 208-1527, www.standardandpoors.com/ratings); or Weiss Group (800 289-9222, www.weissratings.com).
- To be able to waive premium payments in case you're disabled, consider a "waiver policy." They're costly: At Prudential Insurance, for a 20-year policy with \$1 million in coverage, the difference in premium payments between taking a waiver and not taking one is \$1,210 annually.

Enhanced? Only the Expenses

Funds that try to beat the index mostly get beaten



BY TODDI GUTNER

Equity index funds have been so hot that the idea of an "enhanced index" fund designed to beat the Standard & Poor's 500-stock index by a percentage point or two should be even hotter. Although 50 enhanced S&P funds now beckon to investors, however, they don't always live up to their billing. "Many aren't particularly index-like, nor do they always provide much enhancement," says Mark Riepe, head of the Schwab Center for Investment Research at Charles Schwab.

Indeed, only 12 out of the 21 funds that have been around for three years through June 18 have beaten the S&P. One reason for the underperformance: Enhanced funds suffer from high expenses and portfolio turnover—just what index funds are supposed to avoid. Yanni-Bilkey Investment Consulting in Pittsburgh figures that the expense ratio for the average enhanced index fund is 1.1% of assets. While that's less than the 1.47% ratio for the average actively managed fund, it still is more than double the spartan 0.54% for conventional index funds.

What's more, the average enhanced index turns over about 97% of its portfolio each year. Such high turnover can cost shareholders because any short-term capital gains and losses on trades are taxed at ordinary rates. Smith Breeden U.S. Equity Market Plus, for example, had a capital-gains distribution of \$1.91 per share in 1998. Conventional index funds, of course, have minimal portfolio turnover.

Enhanced index-fund managers try to outperform their benchmark several ways. One is by using leverage. Some funds buy and sell stock futures contracts and options along with stocks, or even in place of them—in an attempt to generate 50% to 200% of index returns. Rydex Nova, for example, tries to beat the S&P by 50%. It has not accomplished that since its inception in 1994, but it did return 27%—nearly four percentage points more than the index—through 12 months ended on June 18. Conventional leverage can cut both ways. When the market is falling, Rydex Nova declines a greater amount than the S&P. In 1997, when the S&P market fell 18% through July 17 and August 31, Rydex Nova fell 27%.

A SAFER WAY. Other enhanced index funds try to improve performance through diversification, or stockpicking. For example, Nagorniak, manager of Vanguard Growth & Income, owns about 140 of the 500 stocks in the S&P. The 10 largest holdings in the S&P make up 21% of the fund's portfolio. Nagorniak holds only four of those in his top 10, which makes up 27% of the fund's portfolio. At 3.96% of the fund's assets, the biggest holding is Tyco, a diversified manufacturing company that makes alarm clocks, among other items. Tyco is not in the S&P's top 10. Nagorniak's fund returned 28.26.90% for the S&P for the three years ended on June 18.

A third way that managers try to outperform the index is to buy S&P futures contracts. Some funds invest most of their fund's cash in short-term bonds. Both Smith Breeden U.S. Equity Market Plus and Payden & Rygel Market Return use this strategy. "If you buy the wrong stock,

How Enhanced Index Funds Are Far

FUND/TYPE	TOTAL RETURN*	
	YEAR TO DATE	12 MONTH
CLASSIC		
SMITH BREEDEN U.S. EQTY MKT. PLUS	10.29%	22.53%
PAYDEN & RYGL MKT. RETURN R	9.29	21.90
STOCKPICKER		
VANGUARD GROWTH & INCOME	11.48	20.71
AMERICAN CENTURY INCOME & GROWTH	6.75	19.21
LEVERAGED		
RYDEX NOVA	11.10	26.79
S&P 500 INDEX	5.80%	19.39%

*Through May 31

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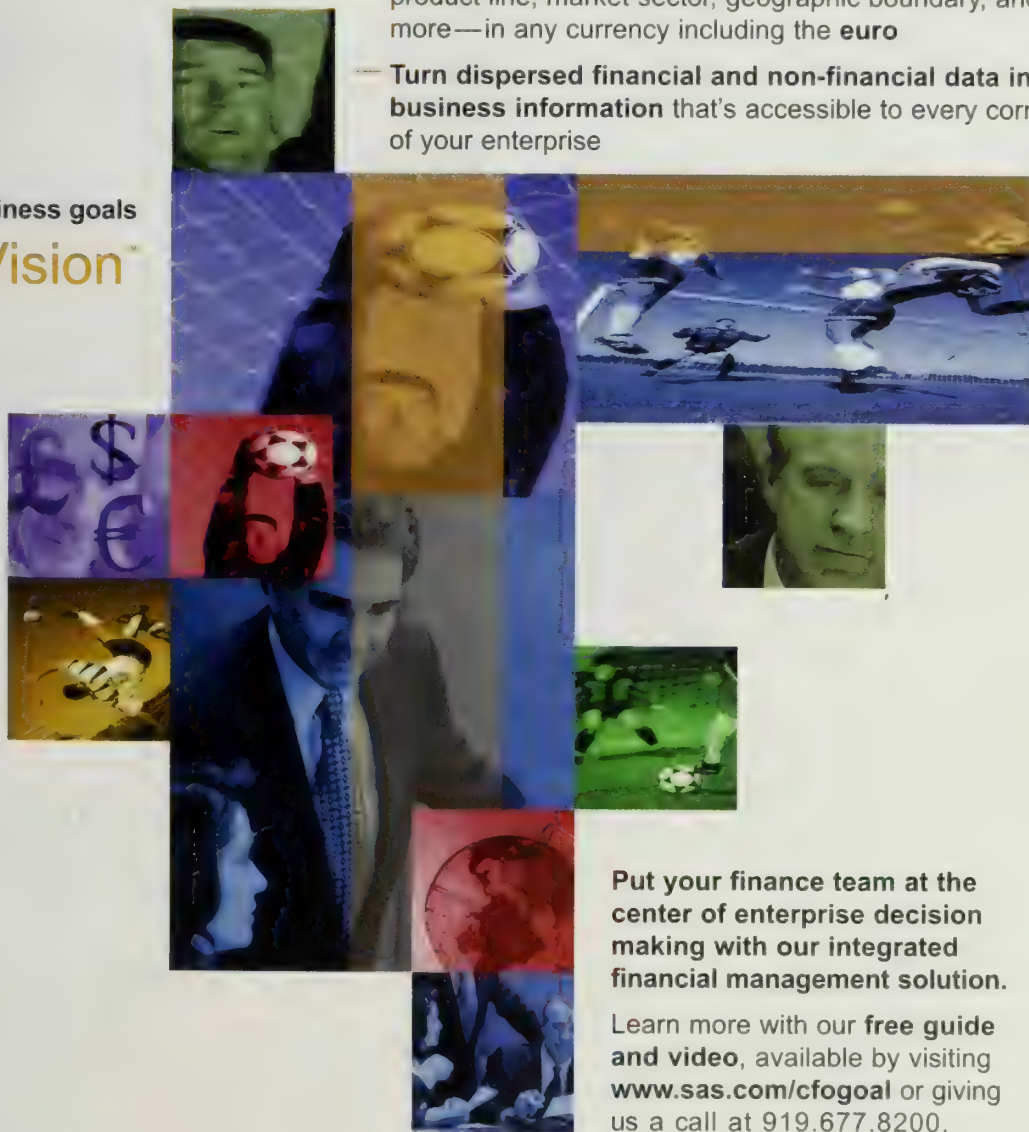
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underperform the index by a huge amount," but not so when you buy the wrong bond, says John Sprow, manager of the Smith Breeden fund.

Since the fund's inception in 1992, Sprow has returned 22% annually, compared with 21% for the S&P. To achieve his returns, he looks for mispriced bonds. Last year, 50% of Sprow's fund was invested in adjustable-rate mortgage debt because he thought it was underpriced. He sold off most of the holding this year as ARMS rose in price.

The S&P 500 isn't the only index to beat. Pro-

Funds UltraOTC, which tries to beat technology-heavy NASDAQ 100 index by it has had a great run. By relying heavily on options and futures trading, UltraOTC returned 146.6% for the 12 months ended June 18, compared with 78% for the index. But this fund is a niche exception. Considering the few extra percentage points of return that most enhanced index funds may give you, you're better off sticking with a conventional index fund. That's where you get lower risk and expenses, plus minimal volatility. Over the long haul, those features add plenty to your investment returns.

HOW A HIGH-TECH STAR STAYS HOT

Extrême valuations don't always bother John Leo, co-manager of Northern Technology fund. He likes highfliers—as long as they're market leaders with earnings growth and strong management. For the three years ended May 31, his no-load fund rose an annualized 43.3%, vs. 22.5% for the average tech fund. This year, the fund has returned 27.4% through June 18. S&P and Morningstar have each given the fund five stars out of a possible five. Leo spoke with Bill Gerdes, fund reporter with S&P Fund Advisor (www.personalwealth.com).



LEO: Finding highfliers that stay aloft

Q: What's ahead for tech?

A: We remain very bullish about the prospects for technology, though the near term may be choppy because of rising interest rates and Y2K. The industry will continue to be a strong contributor to U.S. and world growth.

Q: How do you invest in technology?

A: We look for market leaders within technology subsectors. We want companies that operate in expanding markets, produce earnings growth, and have dynamic management teams. We like companies led by technologists, not hired guns.

Q: What trends are you following?

A: We've recently focused on communications. Our holdings include network chip providers, such as Texas Instruments, Altera, and Vitesse

Semiconductor. Copper Mountain Networks provides technology used to convert copper phone lines into high-speed transmission lines.

Q: Why has the fund beaten its peers?

A: We increased our Internet exposure in late 1997 and early 1998, earlier than many of our peers. Also, we're probably more focused on market leaders and large-caps than the average tech fund.

Q: Some say Net stocks have peaked. What's your view?

A: It would be imprudent to ignore the Internet as an investment opportunity. While rising interest rates have

led to profit-taking, the Net is the most rapidly growing area in technology. We're exposed to some of the few profitable Internet companies, such as America Online and Yahoo!

Q: How are initial public offerings changing the Net investment landscape?

A: Too many Internet companies are going public. The best ones probably already made their debuts, but the increased number of Internet companies may hurt share prices.

Q: What are the fund's largest holdings?

A: Tellabs, Ascend Communications, AOL, Xilinx, and STMicroelectronics.

Q: What are your favorite stocks?

A: We have high hopes for Unicom, which has more than 50% of the market for components for fiber-optic networks. It should gain a strong position after it acquires JDS Fitel, a component supplier.

Q: When do you see a downturn?

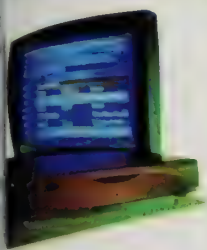
A: We usually see a downturn because of a failure to meet objectives, a slowdown in growth, or competitive disadvantages. Because technology valuations can be so extreme, sell decisions based on valuations can be bad ones.

Leo's Top Holdings

NAME/TICKER	% OF NET ASSETS*
TELLABS/TLAB	4.59
ASCEND COMMS./ASND	4.55
AMERICA ONLINE/AOL	4.52
XILINX/XLNX	3.89
STMICROELECTRONICS/STM	3.78

*As of June 18
DATA: NORTHERN TECHNOLOGY FUND

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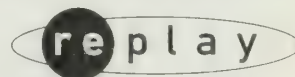
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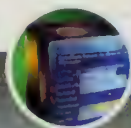
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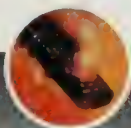
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IS YOUR ANNUITY A DUD? READ ON



BY ROBERT BARKER

They're dull as dust, but if you have one, a little work could very well lead to a better deal

Here's a fearless forecast: The first word of the next sentence will make you want to turn the page. Annuities—tax-deferred investment plans that come with such discouraging terms as “surrender charge” and “mortality expense”—are the financial world's deadliest topic. If neither you nor a loved one owns one, have mercy on yourself and turn the page. For the rest of you, I have a question: Are you satisfied with your annuity?

Mary Sandrowski wasn't. A retired medical transcriber in Redlands, Calif., Sandrowski couldn't help but feel contempt for how little her Hartford Life fixed annuity paid—just 4%. “I thought, ‘I can do this on a bank CD any day of the week,’” she recalls. So she enlisted her son, Phillip Cook, a Torrance (Calif.) certified financial planner (CFP), to find a better deal. He put together a similar contract paying one-half percentage point more a year—but with a first-year, 4% bonus that more than offset a 1% surrender fee on the old contract.

Dumping an annuity isn't something to do lightly. Taxes and fees can kill you. But if the reasons you bought it no longer apply, then why not try to do better? “The annuity marketplace is so competitive right now, there are lots of deals,” says Fort Worth CFP E. Kim Dignum. That's why I formed this four-step plan to help you see if it's worth switching.

STEP 1: Search your files, call your adviser, or phone the annuity company, but one way or another find two facts: the current value of your

contract and the “surrender charge,” percentage fee, you would have to pay to likely ranges from nothing to 10%. One of the firms offering no-load annuities out surrender charges—Scudder (800 2 T. Rowe Price (800 469-5304), and Vanguard (800 522-5555) are three—and see what a contract has been returning. Fidelity (800 244-2442) also offers low-cost annuities, with no surrender charges.

STEP 2: Do the worksheet below. It will give you a quick idea whether you should pay a surrender charge to flee your current annuity for a new one. While cases differ, Melbourne (Calif.) Mary Ellen Baldwin suggests that if your annuity is 2% or less, a swap may put you ahead. You also should look at an annuity's asset allocation. If you make the most of your money in a fixed annuity by moving it into a variable annuity that invests in more volatile assets, such as domestic company or foreign stocks, while using higher-returning bond or money-market funds for the fixed-income slice of your portfolio. Here's why: Annuities often come with a benefit that guarantees against losing your investment—a feature you may as well use on your least stable holdings.

STEP 3: Make sure that if you switch, you can do so via a “1035 exchange.” That allows you to move your money without paying the tax that would be due on withdrawn earnings at high, ordinary income rates. It's akin to rolling over an individual retirement account. Call the company you want the money to go and say the magic words: “1035 exchange.” The company will send you the paperwork, contact your current annuity company, and walk you through the swap. Keep in mind that of your investments, or “basis,” in the

annuity. You'll need it to pay the tax when you take your money out.

STEP 4: If you decide the current surrender charge is still too high for you to be patient. These fees decline each year. If you likely can't afford some of your investments, often 10% out.

The Difference a Point Makes

Deciding whether to trade in an annuity can seem like high finance. Not so. Here's a worksheet to help you.

	OUR EXAMPLE		YOUR CHOICE	
	CURRENT ANNUITY	ALTERNATIVE	CURRENT ANNUITY	ALTERNATIVE
1 CURRENT ANNUITY VALUE	\$100,000	\$0	\$ _____	\$0
2 SURRENDER CHARGE	2%		____%	0%
3 CASH AVAILABLE TO REINVEST		\$98,000		\$ _____
4 ANNUAL RETURN ON ANNUITY	4%	5%	____%	____%
5 VALUE AFTER 1 YEAR (Annuity balance times 1 plus annual rate of return)	\$104,000	\$102,900	\$ _____	\$ _____
6 VALUE AFTER 2 YEARS (Value in line 5 times 1 plus annual rate of return)	\$108,160	\$108,045		
7 VALUE AFTER 3 YEARS (Value in line 6 times 1 plus annual rate of return)	112,486	113,447	\$ _____	\$ _____

fee. Instead of taking income from a lower-cost or higher-return account, tap the annuity for cash—unless you're under age 59½, which means you would be subject to a 10% penalty tax.

Rethinking your annuity is a deadly bore. But with one clear beneficiary—

For barker.online, go to businessweek.com/investor/ or call 1-800-828-8288. Word: BW Daily.

STRONG KICK AT IVAX



G. MARCIAL

Forget the old IVAX, advises drug analyst David Saks of Gruntal. But go, he says, for the revamped IVAX (IVX)—which has sold off assets, reenergized profits, and come out with a bulging pipeline of proprietary drugs, including delivery technologies for cancer and asthma remedies. IVAX produces generic and branded drugs. The stock has yet to reflect the company's "new positive attributes," argues Saks.

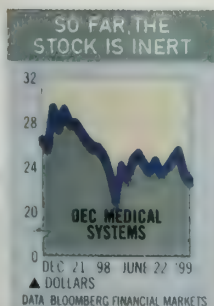
Most medical stocks have been beaten down this year. But Saks predicts that IVAX, now at 13 1/4, will hit 18 in a year and 40 in three. Moreover, "IVAX could be attractive for a possible takeover," given the company's fundamentals and the stock's low price, he adds.

Harvey Eisen of Bedford Oak Associates says that after two failed merger attempts, IVAX has become an even more attractive target. "IVAX CEO Phil Frost is the kind of guy you can depend on to seize an opportunity to boost shareholder value," he adds.

IVAX has alliances with several pharmaceutical companies—any of which could be interested in IVAX, says Eisen. IVAX markets the only generic version of Clozaril, a Novartis schizophrenia drug. And IVAX plans to roll out generic versions of Taxol, Bristol-Myers Squibb's anticancer drug. IVAX has also licensed Easi-Breathe, its patented inhaler technology, to Glaxo Wellcome. CEO Frost wouldn't comment on buyout speculation but says IVAX is "poised to become a global leader," with many of the 50 products under development coming to market on a regular basis.

Gruntal's Saks thinks sales at the rebooted IVAX could leap 65%, to \$1 billion, by 2001. And he sees earnings jumping from 20¢ a share in 1998 to 40¢ in 1999, 60¢ in 2000, and 85¢ in 2001. Some insiders believe IVAX will beat those estimates.

OEC COULD GET BACK ON THE BEAM



Watch out for new sizzle at OEC Medical Systems (OEX), a leader in computer-based instruments, primarily X-ray and fluoroscopic imaging systems. Some big stakeholders aren't too happy. The stock has been on the ropes: down 27% this year, to 22. Not even OEC's announcement in May—that it has developed a "break-through product" in imaging systems—bolstered the price. What to do?

Some big shareholders are said to

be in talks with an investor group interested in taking an active role in OEC. A year ago, one big stakeholder was approached by a medical-device company offering to buy his holdings. This investor declined the offer; the stock was then at 30. He believes OEC is worth 40. This time, he may be tempted to do a deal with another group.

William Harnisch of Forstmann-Leff International, which has a 25% stake in OEC, declined to comment on whether he has had an offer for his holdings. Rumors are that a large medical-device company has been in touch with Harnisch. Fidelity holds about 7% of the stock. Neither OEC Chairman Ruediger Naumann-Etienne nor CEO Joseph Pepper would comment on whether the company had been approached. "We're working closely [with one of our big holders]" for another institution to buy his stake in the company, says Pepper. Adds Naumann-Etienne: "We'll keep developing new technologies and products, and continue to buy back our own shares."

Analyst Vincent Colicchio of Southwest Securities, who rates OEC a buy, has increased his price target for the stock from 28 to 31, based on his fiscal 1999 operating earnings forecast of \$1.43 a share. He expects \$1.70 in 2000.

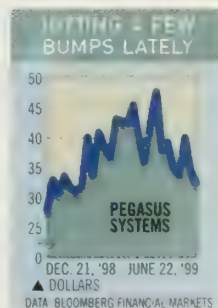
WEB HOTEL BUSINESS: WINGS FOR PEGASUS

Like most of the erstwhile high-flying Internet stocks, Pegasus Systems (PEGS) has taken a sharp hit. The company, which dominates the market for online hotel reservations, went public in August, 1997, at 13 a share and rose to nearly 50 by May 3, 1999. It has since fallen to 32. Not to worry, say analysts—who predict the stock will soon exceed its old high.

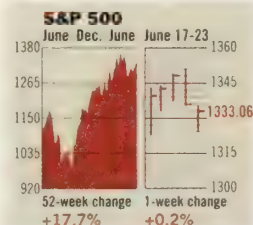
Here's why: Unlike most Internet companies, Pegasus makes money, trading at 33 times estimated 2000 earnings of 95¢ a share. Bear Stearns analyst James Kissane says that, given Pegasus' strong revenue growth and prospects for margin expansion, Pegasus could grow much faster than the average computer-service company over the next several years.

He expects Pegasus earnings to rise by at least 40% annually over the next several years. "Pegasus is the premier provider of transaction processing and E-commerce services to the hotel industry," says Kissane.

Pegasus CEO John Davis says the accelerating trend toward online hotel bookings is the key engine for the company's growth, generating 42% of its revenues. The upside potential to online bookings is huge, says Davis, since only 11% of all hotel reservations, so far, are done through the Web. In all of 1998, Pegasus booked 750,000 Internet reservations. In the first quarter, Pegasus has booked 360,000 online reservations.



STOCKS



COMMENTARY

Interest-rate worries continue to keep a damper on Wall Street. Long-term Treasury bonds, north of 6% for several weeks now, were joined by the 10-year bonds. That put pressure on the Dow Industrials, which gave up 1.1% for the week. Tech stocks provided some upside relief. The broadly based PSE Technology Index gained 2.8%, and the zippier GSTI Internet Index jumped 9.4%.

Data: Bloomberg Financial Markets

U.S. MARKETS

	June 23	Week	Year
Dow Jones Industrials	10,666.9	-1.1	20.8
NASDAQ Composite	2598.1	3.2	40.9
NASDAQ 100	2239.3	3.3	71.9
S&P MidCap 400	411.6	1.4	15.7
S&P SmallCap 600	180.6	1.3	-3.2
S&P SuperComposite 1500	280.7	0.3	18.0

SECTORS

	June 23	Week	Year
S&P/BARRA Growth	741.9	1.1	24.3
S&P/BARRA Value	610.8	-0.8	13.0
S&P Basic Materials	135.2	-2.1	6.1
S&P Capital Goods	1001.8	-0.1	18.7
S&P Energy	846.0	-2.2	11.0
S&P Financials	140.7	0.2	5.8
S&P REIT	85.9	-1.7	-14.2
S&P Transportation	736.5	-0.8	7.5
S&P Utilities	265.6	-1.6	8.7
GSTI Internet	478.5	9.4	215.7
Morgan Stanley Cyclical	596.2	-0.2	17.6
PSE Technology	582.0	2.8	72.4

BEST-PERFORMING GROUPS

	Last month %	Last 12 months %
Communications Equip.	9.5	83.7
Specialty Appr. Retailers	8.5	79.1
Engineering & Constr.	7.1	78.7
Semiconductors	6.0	65.0
Tobacco	6.0	57.9

GLOBAL MARKETS

	June 23	Week
S&P Euro Plus	1331.3	0.0
London (FT-SE 100)	6496.5	-0.1
Frankfurt (DAX)	5399.1	0.0
Tokyo (NIKKEI 225)	17,586.8	2.2
Hong Kong (Hang Seng)	13,976.0	6.2
Toronto (TSE 300)	6937.0	0.2
Mexico City (IPC)	5637.4	0.2

FUNDAMENTALS

	June 22	Week ago
S&P 500 Dividend Yield	1.21 %	1.24
S&P 500 P/E Ratio (Trailing 12 mos.)	33.6	33.0
S&P 500 P/E Ratio (Next 12 mos.)*	24.2	23.7
First Call Earnings Revision*	-1.75 %	-1.07

*First Call Corp.

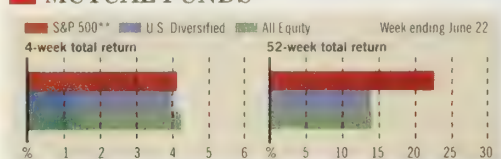
TECHNICAL INDICATORS

	June 22	Week ago
S&P 500 200-day average	1214.4	1205.7
Stocks above 200-day average	57.0 %	56.0
Options: Put/call ratio	0.44	0.55
Insiders: Vickers Sell/buy ratio	1.51	1.23

WORST-PERFORMING GROUPS

	Last month %	Last 12 months %
Hospital Management	-15.2	Manufactured Housing
Apparel Manufacturing	-14.5	Apparel Manufacturing
Cosmetics	-12.4	Metal & Glass Containers
Invest. Banking/Brokerage	-9.8	Hospital Management
Automobiles	-9.6	Food Wholesalers

MUTUAL FUNDS



Data: Morningstar, Inc.

EQUITY FUND CATEGORIES

Leaders	Laggards
Four-week total return	Four-week total return %
Pacific/Asia ex-Japan	16.5 Precious Metals -4.6
Japan	13.9 Real Estate -1.4
Diversified Pacific/Asia	13.9 Domestic Hybrid 1.5
Diversified Emerging Mkts.	12.3 International Hybrid 1.7
Technology	11.4 Mid-cap Value 2.1
Leaders	Laggards
52-week total return	52-week total return %
Technology	71.5 Precious Metals -8.9
Pacific/Asia ex-Japan	69.8 Small-cap Value -5.3
Diversified Pacific/Asia	51.6 Latin America -4.0
Communications	51.1 Real Estate -4.0
Japan	48.3 Europe -2.1

INTEREST RATES

KEY RATES	June 23	Week ago	Year ago
MONEY MARKET FUNDS	4.46%	4.45%	5.09%
90-DAY TREASURY BILLS	4.71	4.67	5.04
1-YEAR TREASURY BILLS	5.16	5.00	5.41
10-YEAR TREASURY NOTES	6.03	5.94	5.46
30-YEAR TREASURY BONDS	6.14	6.08	5.66
30-YEAR FIXED MORTGAGE†	7.72	7.69	7.05

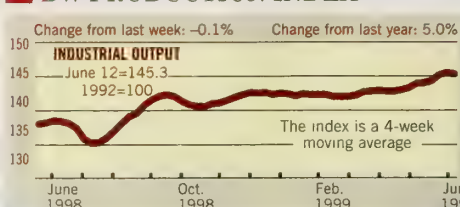
BLOOMBERG MUNI YIELD EQUIV

Taxable equivalent yields on AAA-rated, tax-exempt municipal bonds, assuming a 31% federal tax rate.

	10-yr. bond
GENERAL OBLIGATIONS	4.78%
TAXABLE EQUIVALENT	6.93
INSURED REVENUE BONDS	4.91
TAXABLE EQUIVALENT	7.12

†BancQuote, Inc.

BW PRODUCTION INDEX



Information on each of the index components is at www.businessweek.com.
BW production index Copyright 1999 by The McGraw-Hill Companies

The production index dipped ended June 12. The unaveraged index also down, to 143.8, from 144.1 the previous week. After seasonal adjustment, steel output fell 9.3%, with utilization rate down to 74, the lowest since January. Production of trucks, oil, coal, lumber, and other goods were also down. Electric power up 4.7%.

THE WEEK AHEAD

PERSONAL INCOME Monday, June 28, 8:30 a.m. EDT ▶ May personal income is expected to rise 0.4%, with consumer outlays up 0.6%, based on the Standard & Poor's MMS survey of economic forecasters.

NEW HOME SALES Tuesday, June 29, 10 a.m. EDT ▶ May sales are expected to dip to 950,000 from 978,000 in April.

CONSUMER CONFIDENCE Tuesday, June 29, 10 a.m. EDT ▶ The June index is expected to rise to 136.5 from 135.5.

FOMC MEETING Tuesday, June 29-Wednesday, June 30 ▶ The Federal Reserve's policy

committee meets, and it is expected to lift interest rates by a quarter-point on June 30.

LEADING INDICATORS Wednesday, June 30, 10 a.m. EDT ▶ The May composite index of leading indicators is projected to show a 0.2% increase.

PURCHASING MANAGERS INDEX Thursday, July 1, 10 a.m. EDT ▶ The National Association of Purchasing Management's index for June is projected to drop to 55%, from 55.2% in May.

VEHICLE SALES Thursday, July 1 ▶ Auto makers will begin reporting their June sales with a final tally due on July 6.

FOMC MINUTES Thursday, July 1, 2 p.m. EDT ▶ The Fed will release the minutes of its May 18 policy meeting, which it leaned policy toward tightening.

EMPLOYMENT REPORT Friday, July 2, 8:30 a.m. EDT ▶ June nonfarm payrolls are expected to rise 200,000, with the unemployment rate remaining at 4.2%.

BusinessWeek ONLINE

For more investment data and the components of the production index, visit www.businessweek.com.

x to Companies

gives the starting page for a story or a significant reference to a company. Names are indexed under their own names. Listed only in tables are not included.

ceuticals
Devices
6
16
2
321
33
4
68
r (AAPL) 41
als (AMAT) 41
71
ications
66
onal 47
4, 26, 102
l) 26
K) 16
Systems 42
bertson
B) 41
urance 92
ssociates 99
EL) 24
away
2
ises (BEV) 68
IAB) 88
0
lamilton 28
iquibb (BMY) 99
hoe 54
it Factory
them Santa
olutions 34
eppes 32
ns 85
tan (CMB) 88
32
res (CC) 34
(CSCO) 16, 41,
6
32, 54, 102
erprises
SA) 24
uter (CPQ) 85,
AOL) 26
PWR) 74
Copper Mountain Networks (CMTN) 96
CSM Forecasting 45
CSX (CSX) 29
D
DaimlerChrysler (DCX) 42
Dell Computer (DELL) 10, 41, 88
Dexter Shoe 54
Duff & Phelps 92
E
Eads & Heald Investment Counsel 10
Executive Jet 54
F
Fetzer (Scott) 54
Fiat (FIA) 42
Fidelity Investments 98
Fidelity Management & Resources 99
FlightSafety International 54
Ford (F) 42, 74
Forstmann-Leff International 99
Frontier (FRO) 36
Fuji Photo Film (FUJIF) 88
G
GEICO 54
General Electric (GE) 51, 54
General Motors (GM) 21, 28, 42
General Re 54
Gillette (G) 54
Glaxo Wellcome (GLX) 99
Goldman Sachs (GS) 32, 36, 54
Golfsmith International 34
Groupe Pernod Ricard 32
Gruntal 99
GTE (GTE) 24, 26
H
Hambrecht & Quist (HQ) 48
Harrington & Richardson 6
Hartford Life (HLI) 98
HBO & Co. 36
HCR Manor Care (HCR) 68
Hellenic Bottling 32
Hewlett-Packard (HWP) 54, 88
Holt Value Associates 10
Honda (HMC) 42, 45
Hughes Electronics (GM) 24, 102
I
IBM (IBM) 85, 88
icollector.com 71
Icos (ICOS) 6
Industrial Bank of Japan 47
Info Tech 34
ING Baring Furman Selz (ING) 28, 42, 45, 68
Integrated Health Services (IHS) 68
Intel (INTC) 41, 88
International Data 85, 88
Iridium (IRID) 36

IVAX (IVX) 99
J
J. D. Power & Associates 28
JDS Fitel 96
Johnson & Johnson (JNJ) 102
Johnson Associates 68
K
Kinko's 88
Kleiner Perkins Caufield & Byers 41
L
Legg Mason (LM) 34
Lowell Shoe 54
LTC Properties (LTC) 68
LVMH Moët Hennessy Louis Vuitton (LVMHY) 71
M
Mariner Post-Acute Network (MPN) 68
McDonald's (MCD) 54, 88
MCI WorldCom (WCOM) 36
McKesson HBOC (MCK) 36
McKinsey 48
MediaOne Group (UMG) 24
Merrill Lynch (MER) 6, 42
Metricom (MCOM) 36
Microsoft (MSFT) 10, 20, 36, 54, 85
Midland Life Insurance 92
Mitsubishi 42
Moody's Investors Service 92
Morgan (J.P.) (JPM) 32
Multicare 68
MySoftware (MYSW) 48
N
National Semiconductor (NSM) 41
Netcraft 85
Netscape Communications (AOL) 41
NexTrend 28
Nintendo (NTDOY) 51
Nissan (NSANY) 42, 51
Norfolk Southern (NSC) 29
Northern Technology Fund (NTCHX) 96
Novartis (NVTSY) 99
O
OEC Medical Systems (OXE) 99
Oracle (ORCL) 41, 85
P
PaineWebber (PWJ) 54, 68
ParaGraph International 48
Payden & Rygel Market Return (PYMRX) 94
Pegasus Systems (PEGS) 99
PGA 34
Pincus Brothers-Maxwell 34
Porsche 42
Preston Gates & Ellis 48
PricewaterhouseCoopers 42
Profunds Ultra OTC (UOPIX) 94
Prudential 48
Q
Quadlux 51
Qwest Communications (QWST) 36
R
Redback Networks (RBAK) 26
Red Hat Software 85
Rover 42

Royal Dutch/Shell (RD) 54
Rydex Nova (RYNVX) 94
S
Salomon Smith Barney (C) 24, 27
Samsung 51
Sanwa Bank 47
SBC Communications (SBC) 24
SC&T International (SCTU) 72
Schroders Japan 42
Schwab (Charles) (SCH) 94
Scientific Learning Corp. 51
Scudder Kemper Investments 98
Secom (SECM) 6
See's Candies 54
Sega Enterprises 42
SG Cowen Securities 36
Smith & Wesson 6
Smith Breeden U.S. Equity Market Plus 94
Sony (SNE) 51
Southwest Securities 99
Sovereign Equity Management 72
Standard & Poor's (MHP) 28, 92, 94, 100
STMicroelectronics (STM) 96
Stone & McCarthy Research Associates 27
Sun Healthcare (SHG) 68
SuSE 85
T
Tele-Communications (T) 24
Tellabs (TLAB) 96
Texas Instruments (TXN) 96
3Com (COMS) 36
Titleist 34
Total World Communications 72
TowerGroup 70
Toyota (TOYOT) 42
T. Rowe Price (TROW) 98
Tyco (TYC) 94
U
Union Pacific (UP) 29
Uniphase (UNPH) 96
United Airlines (UAL) 36
United Parcel Service 29, 36
U S West (USW) 36
V
Vanguard Group 94, 98
Vencor 68
Vitesse Semiconductor (VTSS) 96
Volkswagen (VLKAY) 42
Volvo (VOLVY) 42
W
Weiss Group 92
Wells Capital Management 18
Wirthlin Worldwide 6
X
Xilinx (XLNX) 96
Y
Yahoo! (YHOO) 96
Yanni-Bilkey Asset Management 94

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IT'S AN E-WORLD— AND THAT'S NOT BAD

It costs \$22.50 to buy "The Emerging Digital Economy" directly from the Commerce Dept., but you can download it from the Internet for free. That pretty much sums up the substance of the report, which shows that electronic commerce is changing the nature of the U.S. economy and generating much of its growth. Information technologies are bringing down inflation, raising productivity, hiking employment, and boosting wages, according to the study. If anyone still needed proof of the rise of a New Economy, here it is.

Only last month, the University of Texas released a study sponsored by Cisco Systems Inc. reporting that E-commerce generated \$301 billion in revenues last year, matching the auto industry but growing much faster and employing far more people. Most of it comes from hardware spending to build the Net, but an increasing amount is actual business conducted among companies and between them and consumers.

The advent of the New Economy doesn't change everything. Business cycles will continue, albeit in forms we perhaps have yet to discover. The verities of the marketplace won't disappear. But business models, stock valuations, and growth potential appear changed in some fundamental and positive sense. It's no small thing.

NET ACCESS: HANDS OFF, FOR NOW

They're campaigning hard, lobbying aggressively, forming coalitions, and spending lots of money. Gore and Bush running for President in 2000? No, high-tech companies battling it out in Washington and in cities across America over access to the Net through broadband cable systems. The issue is one of the most important facing the New Economy—how best to ensure openness and competition over the Net (page 24).

America Online Inc. is fighting to get regulators to force AT&T to open its cable pipes to all competing Internet service providers. AT&T, fresh from spending \$120 billion to gain access to 60% of U.S. homes with cable, wants the government to keep out. A federal judge in Portland, Ore., just agreed with AOL. The city of Los Angeles may side with AT&T. Federal Communications Commission Chair William Kennard thinks it's nuts for every town in America to have its own telecom policy. And consumers just want fast, cheap access to the Net. What a mess. What to do?

Maybe nothing. AOL and many entertainment, financial, and retail companies doing business on the Web are afraid that AT&T will favor its own portals and business sites. They have a point. Cable, after all, is a bunch of local monopolies. Until recently, so was the telephone business.

Yet AT&T's cable lines will carry video, Internet, and tele-

phone services and provide the Baby Bells with their competition in local phones. AT&T also says its high-speed cable modems will pressure the Bells to finally provide their own high-speed Internet digital subscriber lines.

The truth is no one knows what will be the best way to deliver Net access. AOL just signed a \$1.5 billion deal with Hughes Electronics Corp. to deliver high-speed Internet service over satellites through television. If that works, TV could trump cable and phones for Net access. What?

Be it taxes, privacy, or free speech, Washington has taken a hands-off policy toward the Internet. The explosive growth is testimony to the success of this policy. Like it or not, local governments should follow Washington's example. If the monopolistic tendencies of cable and phone begin to reassert themselves, the federal government can always step in. But with technology changing and the nature of Net delivery to the home still in flux, the best government policy remains no policy. That's a lesson Los Angeles and Portland, Ore., as it is in Washington, should learn.

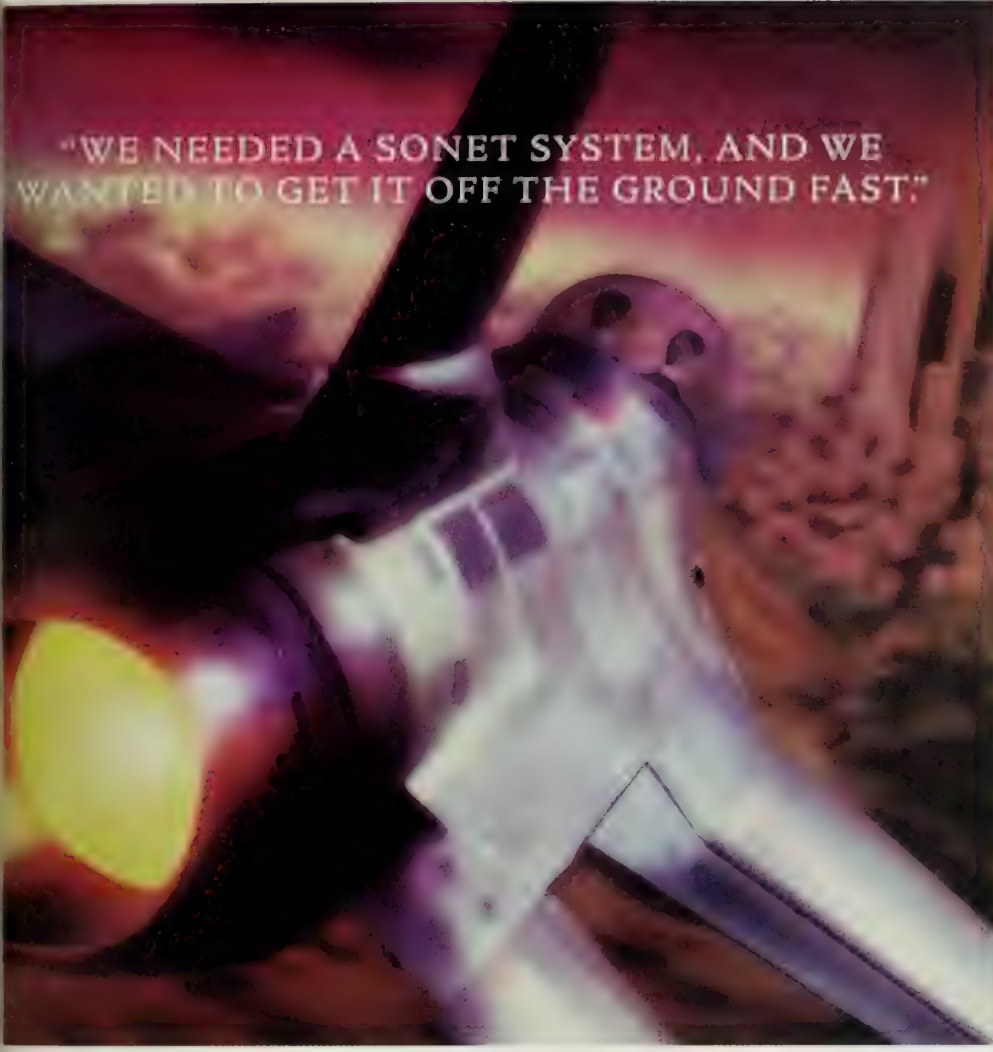
COKE'S HARD LESSON CRISIS MANAGEMENT

Seventeen years ago, James E. Burke wrote the book for handling corporate catastrophe when, as CEO of Johnson & Johnson, he managed the Tylenol scare. His advice: Be visible, be sympathetic, be responsive. Coca-Cola's Chairman and CEO M. Douglas Ivester is now trying to do the same, three weeks after 200 people in Belgium and France, including children, came down with nausea and dizziness after drinking Coke. Banned in Belgium, Luxembourg, Spain, and the Netherlands until June 23, Coke, perhaps the most valuable brand in the world, suffered mightily (page 25).

Ivester has belatedly flown to Brussels and put out a personal apology in Belgian newspapers. Coke has a special consumer hotline and has offered to pay all medical bills. And it has identified poor-quality carbon dioxide fungicide used to treat wooden pallets as the source of the smell and off-taste that might have caused illness.

CEOs of global corporations, of course, cannot be expected to jump on a plane every time something goes wrong. Some problems require immediate action. Europe has been gripped by a food-safety obsession for some time. Last month, Belgium's government fell because it was acting over cancer-producing dioxin in chickens. In the Netherlands, the government came under fire for being slow to halt the spread of mad cow disease. Food from both countries were found to be contaminated. Unlike those cases, Coke has not been found to be a health hazard. Indeed, it is possible that the children who got nauseous were simply caught up in the food-safety hysteria.

All the more reason for Ivester to have moved decisively. Global companies must be aware of national sensitivities. When something goes wrong, CEOs don't have to admit if there is none, but they should show they care and do whatever it takes to restore confidence in their products.



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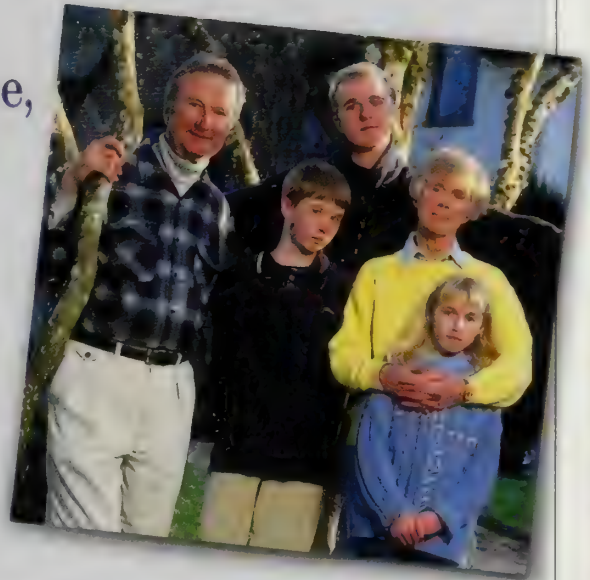
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GENE THERAPY

For Dave and Lynn Frohnmayer of Eugene, Ore., and their children Mark, 24, Jonathan, 14, and Amy, 12, the joys of family life mingle with anger, denial, and grief.



Two other daughters, Kirsten and Katie, died of a genetic disease. Amy inherited it, too, but her future may be brighter. Researchers are perfecting tools that might save her life. PAGE 94



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COVER STORY

GENE THERAPY

Living under the shadow of a terrible genetic disease, one family is part of an effort to cure such disorders at the most basic level **page 94**

BusinessWeek

JULY 12, 1999

Cover Story

94 GENE THERAPY: ONE FAMILY'S STORY

Less than a decade ago, early, controversial attempts to correct hereditary disorders produced flickers of hope—but failed. For the Frohnmayer family, that left only unrelenting grief over the death of two daughters afflicted with a rare ailment, Fanconi anemia. Now the family is helping researchers find new weapons against the killer in its midst

104 WALL STREET CATCHES ITS BREATH

After a stock runup and then a slump, gene-therapy companies plod on

News: Analysis & Commentary

30 HANDLING THE HOT-ROD ECONOMY

The new consensus on growth rates has wide policy implications

32 WHAT DO YOU DO WITH \$1 TRILLION?

The budget surplus keeps growing, and pols square off over how to use it

34 AN INTERVIEW WITH BILL CLINTON

On the New Economy and spreading the wealth

35 THE TUNDRA'S ROARING START

Toyota can't keep up with demand for its smooth-riding pickup

36 WHO WILL BE COMPAQ'S NEXT CEO?

The board's activist stance may be thwarting the search for a boss

36 ALTAVISTA ON THE MOVE

It provides a fresh challenge to its new owner, Net incubator CMGI

37 CNET GOES FOR BROKE

The Web technology maven is spending \$100 million to build up its brand

38 INTEL IS TAKING NO PRISONERS

It's slashing prices to gain market share and blitz the competition

40 FENWAY VS. A GREEN MONSTER

In an age of big-money ballparks, Fenway is an economic anachronism. But should it be replaced or rebuilt?

42 PEARSON'S WILY DEALMAKER

CEO Scardino may not be finished selling and buying: Now, she's eyeing the Web

45 COMMENTARY: LAWSUITS

Tort law needs to be tweaked, not trashed

46 IN BUSINESS THIS WEEK

Economic Analysis

22 ECONOMIC VIEWPOINT

Barro: My lunch with U2

26 ECONOMIC TRENDS

Debating the New Economy's mysterious job growth, how it benefits corrupt regimes

27 BUSINESS OUTLOOK

The Fed moves, the market reacts, but is this really a one-time event?

147 COMMENTARY: COLLEGE

Lighten the debt burden

The Global 1000

49 CALL IT THE NET EFFECT

The biggest influence in the new ranking? The Internet. Who are U.S. upstarts or offshoots? powerhouses, companies are linked to the Net have instantly become market

52 COUNTRY BY COUNTRY

80 ALPHABETICAL LIST OF COUNTRIES

84 EMERGING MARKETS RE-EVALUATED

Asia leads the way, as in their enthusiasm for vent

RISK FOR SALE

Will new securities
leave reinsurers out
in the cold? page 116

JACKSON IN THE VALLEY

Pushing for
minority jobs

page 111



LOGGING IN LATE

News Corp. finally comes to
the Internet party page 88



SOLE ON ICE

Will glitz revive the
sneaker market? page 106



TRIBAL ART

Rugs that get
better with age

page 152

GLOBAL 1000

reshuffles

page 49



NOMY

d
are
over the
strong

page 30

DOES THE CYBERHUSTLE

Murdoch's News Corp.
a fresh shot at Internet
ventures

ting

ING FOR SPORTS SHOES?

urers hope radical designs,
technology, and down-to-earth
talt the slump in sneakers

NO JOY IN MALLVILLE

nsion and a fashion shift have
thletic-shoe retailers

Issues

KEYS ON SILICON VALLEY

h Land claims to be a
ey. So where, Jackson asks,
lacks and Hispanics?

re

MARKET IN INSURANCE RISK

ys, bondholders are snapping
used to be laid off on

120 COMMENTARY: REGULATORS

The watchdogs barely growled in the
huge Martin Frankel fraud case

122 MERRILL IS BULLISH ON PAPER CLIPS

The brokerage firm's new E-commerce
strategy targets small businesses

124 COMMENTARY: BEAR STEARNS

It deserves more than a slap on the paw

126 COMMENTARY: MARKETS

E-bonds level the trading field

Information Technology

18 TECHNOLOGY & YOU

Is Linux a threat to Microsoft?

142 A TOUGH SELL ONLINE? GUESS AGAIN

Art, clothes, even food are starting to
move as E-stores use technology and
aggressive service to win consumers

BusinessWeek Investor

148 MUTUAL-FUND BLUES? TRY A WRAP

More and more investors are turning to
separately managed accounts

150 SECRETS OF THE CPI

The first in a series of articles about the
numbers that move the markets

151 ECONOMICS FOR THE MASSES

The Net makes it accessible

152 NAVAJO RUGS ARE HOT AGAIN

They're commanding record prices

154 THE BARKER PORTFOLIO

A strategy that's built to last

155 GENE MARCIAL: INSIDE WALL STREET

Features

6 UP FRONT

10 READERS REPORT

14 BOOKS

Clark with Edwards: *Netscape Time*
Andrews: *How the Web Was Won*

139 DEVELOPMENTS TO WATCH

A micropump, computerized eyes for
MRIs, honey vaccines

156 FIGURES OF THE WEEK

157 INDEX TO COMPANIES

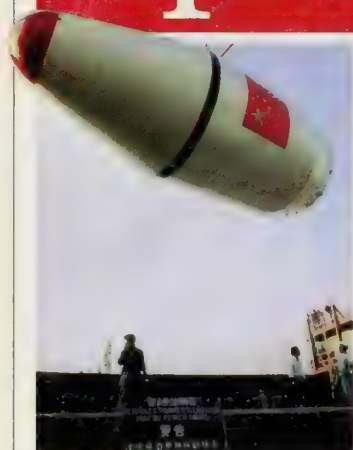
158 EDITORIALS

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Up Front

EDITED BY ROBERT McNATT



THE FEDS

WHY SATELLITE DEALS MAY NOT FLY

THE LATEST BUZZ IN PARTS OF the aerospace industry is that profits may soon nose-dive because of a recent piece of legislation. Companies such as Lockheed Martin, Loral, and Hughes Electronics are worried that far-reaching new rules meant to prevent the transfer of sensitive technology to China will end up badly hurting satellite sales to other countries, too.

I-WAY PATROL

CROSS-DRESSING, DEF CON-STYLE

FOR YEARS, HACKERS AT Def Con, the nation's premier hackers convention, have had fun playing "Spot the fed." It's a good-natured game where hackers try to spot the FBI, CIA, and other federal computer specialists checking out possible threats to the national security. This year, however, winning may not be so easy.

It wasn't hard to spot the feds in years past, says Jeff Moss, a show organizer. "There was the military haircut, the penny loafers, the big athletic build. And if you engaged them in conversation, they'd answer

Last fall, Congress gave the State Dept., rather than the more trade-oriented Commerce Dept., the power to grant export licenses on satellite sales. Congressional

CONCERN: that Hughes and Loral indirectly aided China's military by cooperating in China's probes of launch failures carrying the companies' satellites.

The 1998 law, however, covers all satellite exports, not just ones to China. That has caused delays and uncertainty that give foreign competitors an edge. Lockheed Martin says some customers now say they may use French satellites, and the Aerospace Industries Assn. reports that satellite makers have already lost \$1 billion in sales. The State Dept. says the situation may improve with more funds to speed license reviews. For satellite makers, that can't happen soon enough. *Stan Crock*

'Affirmative' and 'Negative.'" The word is out that at this year's show, which starts July 9 in Las Vegas, the feds will try harder to blend in. Many are expected to show up in hackers' garb—which can be anything from T-shirts and jeans to evening gowns. To compound the confusion—or add to the fun—more hackers are expected to attend in suits.

During the conclave, attendees will vote on whether a suspect is indeed a

GAME: Spot the fed

fed. The agent might even confess. The winner will get an "I spotted the fed" T-Shirt. The agent will get—what else?—a T-shirt saying "I am the fed." *Roy Furchgott*

TALK SHOW "Some of you have practiced 21 years whining and getting your way"

—Bill Cosby, giving the commencement speech at Colgate University

MEMO PEEKING

IS MERRILL GUILTY OF 'SCHWABIZING'?

IN PUBLIC, CHARLES SCHWAB co-CEO David Pottruck is all sweetness and light when he talks about Merrill Lynch's entry into the online trading business. "I think they can be very successful," he said June 24 during a roundtable discussion at the Forbes CEO Forum in Atlanta. "I have great respect for Merrill Lynch."

But on his own turf, the cattiness erupts. Soon after Merrill announced its online trading plans on June 1, Pottruck proceeded to dis the securities giant in a big way. "They're 'Schwabizing' themselves," he said in an E-mail circulated to Schwab's 15,000 employees. Pottruck wrote that an old-line firm like Mer-

rill doesn't have the spirit to make it space. "Can you imagine Merrill Lynch doing something like Vision Quest?" he stated, referring to Schwab's recent big pep rally in San I



CATTY: Pottruck and Schwab

"Merrill is just not to the importance of that much energy" in work, wrote Pottruck. A Merrill spokesman declined to comment on the memo's specifics. But he counted the idea that is 'Schwabizing.' And he was confident about Merrill's prospects: "Ultimately, they will decide." *Lo*

BUY NOW: Consumer loans may help banks recover



BANK NOTES

A GREAT LEAP FORWARD INTO DEBT

CONSUMER LENDING, ONCE virtually nonexistent in China, is suddenly everywhere. Buy a PC. Buy an air conditioner. Buy a car. What's behind the lending frenzy? Beijing hopes that a consumer spending spree will halt a 19-month slump in prices and help ailing banks.

Banks are buried under \$250 billion in bad loans to

state-owned enterprises providing profit balance out those losses. Consumer loans may force banks to adopt more sophisticated credit analyses, officials say. Western manufacturers are ready for the challenge. Already, China Construction Bank has said it will help finance production of Chinese-made Buicks and \$30,000 Transits. Banks are regularly turning

financing plans, and in March, they have begun to offer streamlined approvals. "Even if you see this as a new opportunity," says Cao Yi, an executive at Beijing City Commercial Bank. Earlier this year, China also hinted that it would give foreign firms greater access to the consumer markets as part of its effort to join the World Trade Organization, whetting the appetite of Western banks for even more. *Dexter Filkins*

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Up Front

WHEELER DEALERS

A NEW CENTER OF THE UNIVERSE

HARVEY WEINSTEIN, WATCH out. The head of Miramax Films is planning a \$150 million movie studio at New York's Brooklyn Navy Yard. But even that may not make him the city's top entertainment mogul. Why? The Donald wants in.

For starters, real estate tycoon Donald Trump is moving the nonproduction staff of his Miss Universe organization from Los Angeles to the Land of Bagel-and-a-Schmear in September. "New York right now is the hottest city anywhere in the world," Trump says. "There is a pattern of entertainment and



other things moving back." Then there's that movie-production facility he wants to build in Manhattan. He won't spell out details on that yet.

Trump says he's moving the headquarters of the pageant, staged annually at

various exotic sites, to New York for solid business reasons. It's half-owned by CBS, and some big sponsors, like Speedo and Clairol, are there. Of course, Trump lives in Manhattan, too. Does he mind having those winsome winners nearby? "I

don't date Miss Universe," he says. Then he reconsiders: "If the right one happens along, perhaps I will. It's a business deal, and, generally speaking, you look but don't touch. But perhaps I could be persuaded differently." *Joan Oleck*

PRODUCT PEEK

FOR OBIT AND PHOTO, CLICK HERE

DEAD MEN TELL NO TALES, so the saying goes. But now, the Internet has spawned several companies that aim to let the dead tell their tales forever—online.

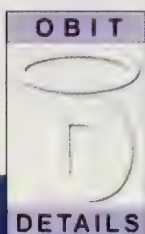
Those who have shuffled off the mortal coil wouldn't be speaking from the other side, of course. But for a one-time fee, their friends and relatives can post

your loved one's multimedia obituary at livingtributes.com for \$125. World Wide Cemetery will do a bargain-basement version for less than \$20.

Who cares if you're not a celebrity? "No matter what their notoriety, everyone can be remembered," says Stophar Bartol, chief executive of ObitDetails.com.

It's not all vanity, though. The Web sites also offer services to survivors in conjunction with local funeral homes. Arrangements.com will locate nearby florists, provide driving directions to the funeral parlor, or point to information on airfares.

So far, most of these obituary sites boast only a few hundred members. It seems people aren't dying to be on the Internet just yet. *Stacey Higginbotham*



an obituary—along with pictures and sound clips—that will float in perpetuity in cyberspace.

Immortality Inc. will post

DRAWN & QUARTERED



VACATION NATION

IN FLORIDA, NICE TIPS FOR THE MAID

COMPUTER WHIZZES AND PRO athletes aren't the only ones getting signing bonuses these days. In Orlando's booming "T-shirt economy"—based largely on millions of visiting tourists—a shortage of service workers is so severe that employers are offering cash upfront to woo them. With central Florida's 2.8% unemployment rate, there just aren't enough maids, fast-food workers, and the like. "It's a desperate situation," says John Fremstad of the Orlando Regional

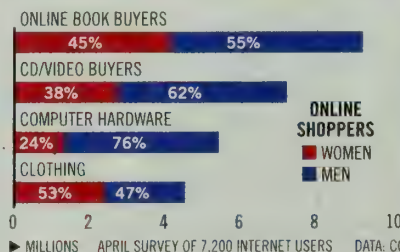


Chamber of Commerce. Dozens of restaurants, like the Orlando Inn, are paying \$500 to lure workers who pay starts at only one hour. The Orlando offering as much as \$1,000 moving costs to Miami to relocate. Walt Disney even flown in 10 keepers and workers from Rico, paying a \$1,500 tuition. The state has the money to pay for the service workers were created in ended May, 1999, and say Orlando needs 23,700 more tour through 2001. *Dennis*

THE BIG PICTURE

WHO'S DRIVING E-COMMERCE?

In the nine months through April, 1999, the total number of online shoppers jumped 40% to 28 million. Women's numbers, however, jumped 80%, to more than 10 million.



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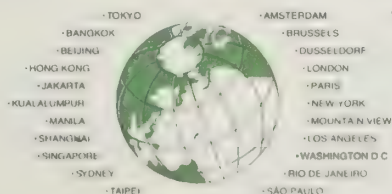
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THE 'DIAL TONE' OF THE INTERNET

You are to be commended for reminding readers that, while the online transaction itself is changing the way much of our commerce is conducted, the principal beneficiaries of the Internet Age today are the companies involved in building the infrastructure for this "New Economy" ("The Info Tech 100," Special Report, June 21).

In describing the builders of the new economy, however, you neglected to highlight two of the Internet's central underlying truths. The first is the explosion in the sheer amount of data that is provided online. The second is people's growing realization that the constant availability of the information is as important to Internet-based businesses as the dial tone is to telephone-service providers.

These truths are among the reasons EMC Corp., as the leader in providing Net businesses with the hardware and software to store, protect, and manage all this information, was ranked No. 6 among the Info Tech 100. We have customers whose businesses didn't exist three years ago and that now store more information online than the largest banks in New York.

And every time a major E-commerce outage rears its ugly head and cuts a Web company's market capitalization by a third, more of these companies learn the lesson that a robust information infrastructure is an essential requirement for survival.

It's not just Cisco Systems Inc.'s pipes and Dell Computer Corp.'s nuts and bolts. At its core, the Internet phenomenon is about constant, uninterrupted access to information.

Michael C. Ruettgers
 President and CEO
 EMC Corp.
 Hopkinton, Mass.

We at Comverse Technology Inc. were pleased to see our strong growth, financial performance, and shareholder return lead to a No. 16 ranking in your

recent Info Tech 100 list. Your mention of Comverse, however, at less than 10% of our business.

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Paul
 Vice President
 Comverse Technology Inc.
 Woodbury, N.J.

WHEN SHOULD NET COMMERCIALS GET WHACKED BY TAXES?

"Don't rush to tax E-commerce," says the June 21 editorial, is small comfort to municipal officials and even less so to the merchants on these cities' main streets and in their shopping centers.

You don't question the need for even and fairly. You suggest, however, that the Internet tax moratorium should be extended an additional year, even though the admission that is to recommend had yet to meet.

Your reasoning—that states should wait because they are running large budget surpluses—is shortsighted. Furthermore, your position is illogical: that if sales-tax revenue is to wane, income-tax revenues can't. In the same issue, "A Tax: Not if, but when" (Legal Affairs) points out that sales taxes account for about 49% of all state tax revenue, more than individual income taxes combined. Do you believe that almost half of all state revenue could easily be replaced by a come-tax revenue?

The Internet Tax Freedom Act delays a three-year moratorium on state and local taxes on Internet sales and transactions. Purchases made through the Internet, however—like those made through catalogs—are subject

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te and local sales taxes. According to the latest U.S. Supreme ruling on the subject, if the seller has a "nexus" in a state (a warehouse, and a distributor) the seller must collect state and local taxes.

If a seller does not have a "nexus," the purchaser is required to pay a sales tax. Congress has the power to regulate Internet and catalog retailers and remit sales and use taxes the same way brick-and-mortar retailers. It can and should do that. A done, reform of the overall tax system then be undertaken without having to put brick-and-mortar retailers at a disadvantage and municipalities at risk.

William H. McCabe Jr.
Chairman
International Council
of Shopping Centers
New York

with interest Mike France's worry on the crazy quilt of state rules that could soon burden interstate commerce. An examination of the various state laws place on interstate trade is long overdue, and it's time to look at state income-based

the most commonest complaint heard from U.S. businesspeople is that the state income tax laws are incomprehensible and burdensome. But the varying income-tax laws are just as complex—and in some ways far less predictable.

When I tried to explain to a client with \$300,000 in gross receipts why he had to file sales and income tax returns in five states, while he had billions of dollars in annual sales in just four. The sad truth is that it's simpler from an income tax standpoint to do business overseas than it is to do business in the United States.

It doesn't have to be this way. The Commerce Clause in the Constitution, Congress has the power to simplify and clarify the taxation of interstate commerce. It did so back in the 1950s—preventing states from imposing an income tax on interstate commerce whose only business within a state was soliciting sales of tangible personal property.

Current interpretations, soliciting sales of intangible property such as software or sales of services do not get any such protection. And that leaves businesses only from a state income tax. But some states, most notably Michigan, impose, instead of an income tax, another type of tax (the business tax) that is, to some extent, based on income.

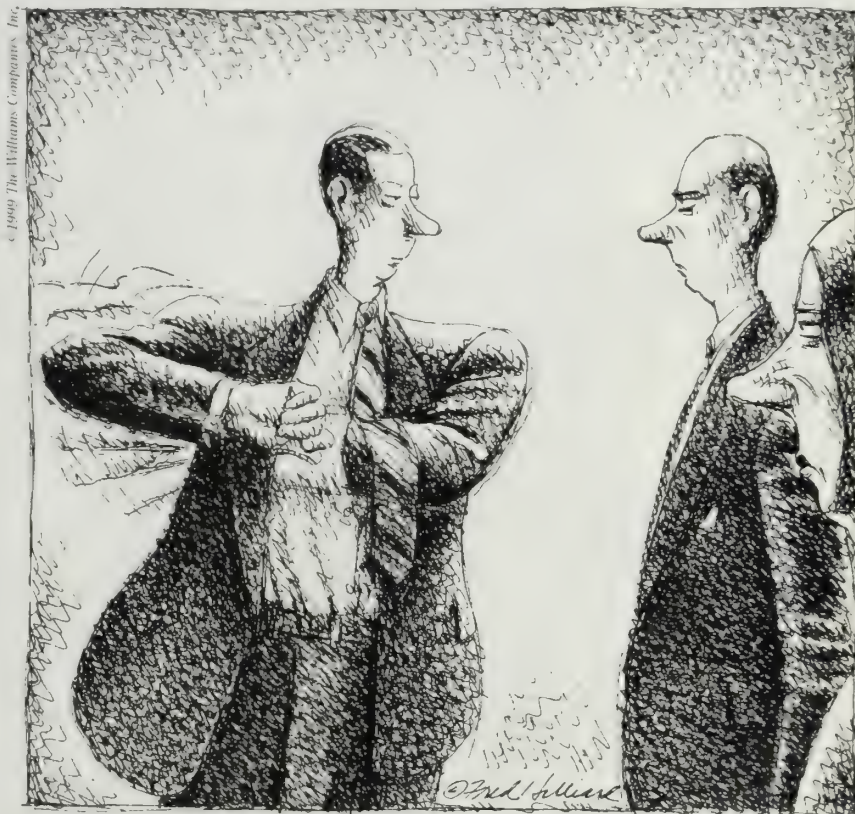
Let's be clear what we're talking about here. A congressionally imposed limitation on the states' power to impose tax on interstate business would not exempt any business from taxation—it would only limit the states that it would have to file with and pay tax to. It's time Congress acted to eliminate this excess burden and the attendant costs that make doing interstate business a nightmare.

Joel Weinstein
Torrington, Conn.

E-commerce is a new way of doing business. Instead of worrying about how governments are going to get their tax take, they should worry about a new way for them to do their business. All government groups should ask the following questions about every function they perform:

1. Is this function necessary today and will it be needed tomorrow?

2. Can this function be performed by other individuals or organizations better or as well as it can be performed by



Having decided to align his company with Williams, Ed makes one last comment about unreliable vendors.

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Readers Report

government? Government needs to go back to its useful functions—protecting the rights of individuals and teaching a code of responsibilities—so it can do less and less itself.

Harlan A. Bentzinger
Edinburg, Tex.

The most important fact about the Internet and its daughter, the World Wide Web, is that it doesn't know anything about geography. I have a friend in San Antonio who designs E-commerce systems. Some of his clients are halfway around the world. He uses servers in North Carolina because they're cheaper than anything he has found in Texas. Try to impose sales taxes on him or his clients—and those servers will suddenly be in Mexico. Or Cuba. Or Pago Pago.

Politicians love the idea of sales taxes because they are easy to collect, they generate a steady revenue stream, and they are easily adjusted by adding or subtracting a few items, or by changing the rate by a few decimal points. But sales taxes are inherently regressive and irrational.

A better idea would be to eliminate the sales taxes at the consumer level. Value-added taxes are easier to collect, they generate a steady revenue stream, and they are easily adjustable. They're also regressive, but the world ain't perfect, is it?

Stuart M. DeLuca
Austin, Tex

THE HIDDEN COSTS OF GAMBLING

"Sure there's a price, but it pays to play" (Government, June 21) refers to the casino industry's "dirty little secret," that "for every job that the casino industry creates for Shreveport, La., or Hammond, Ind., it likely loses one from somewhere else."

What about the fact that the \$630 billion swallowed annually by gaming includes billions that could be devoted instead to essential services such as education and health care? Not only do casino jobs subtract jobs from other industries; they also have huge costs in human development.

Tom Riordan
South Orange, N.J

TEMPORARY EMPLOYEES AND WORKPLACE ETHICS

"A leg up for the lowly temp" (The Workplace, June 21) left out the most important reason why the staffing in-

dustry does not support union-backed "ethics police": Our National Association of Temporary & Staffing Services already has a strong code of ethics. Also, no NATSS "officials" said that "small agencies" are the source of most abuses and that large companies are not a problem. Small businesses make up most of the companies in our industry and, no less than large ones, operate with the highest ethical standards.

Edward A. Lenz
General Counsel
National Association of
Temporary Staffing Services
Alexandria, Va.

WHO'S SNOOPING ON WHOM?

"Suddenly, financial privacy is a hot-button issue" (Washington Outlook, June 21) should have pointed out that one element of the problem is the credit-reporting companies' failure to verify identities of those seeking credit reports on consumers.

A local private investigator here used my company's identity in order to obtain a credit report on someone he was investigating, so that when the consumer obtained a copy of his own records, the PI's name wouldn't show up as having been snooping. Legislation is the only way to make these huge corporations be more responsible with the terribly sensitive and personal data that they control.

Kelly Boyd
Ashland, Pa.

WHY CHINA BELONGS IN THE WTO

An eye for an eye? Not. Rather than casting a symbolic protest vote against permanent normal trade relations with China and its membership in the World Trade Organization (WTO), Congress is obliged to demand foolproof regulations that also improve relations between the two nations ("Why the U.S. should welcome China to the WTO," Economic Viewpoint, May 31).

Eastman Kodak Co.'s recent \$1 billion investment to increase market share in China is a new channel that will benefit the world's leading photography company, its employees, and customers.

The success of my California photo-retail business is largely due to Kodak's celebrated brand of photographic products and worldwide quality reputation. My recent monthlong travels in Europe confirmed my awareness of Kodak's dominance. Its familiar banner logo

seemed to be on display everywhere in Denmark, Austria, Greece, and the Czech Republic. If European countries can fundamentally structure their economies, their opportunities, jobs, and demographics that we stand to gain from normalized trade with other nations.

A balanced trade relationship is that the U.S. be allowed its ingenuity, quality, and culture, and developing countries as a moderating change. As the third-largest market for Kodak, China is home to opportunities, especially if patents are exchanged for low-tariff access to U.S. manufactured products.

China will conform to international guidelines and be pressured to compete on a level playing field confirmed with normal trade relations. Membership in the WTO would ensure fairness and demand enforcement with fair regulations equal to other nations.

Mitchell C.

30 Minute Photo
Irvine, Calif.

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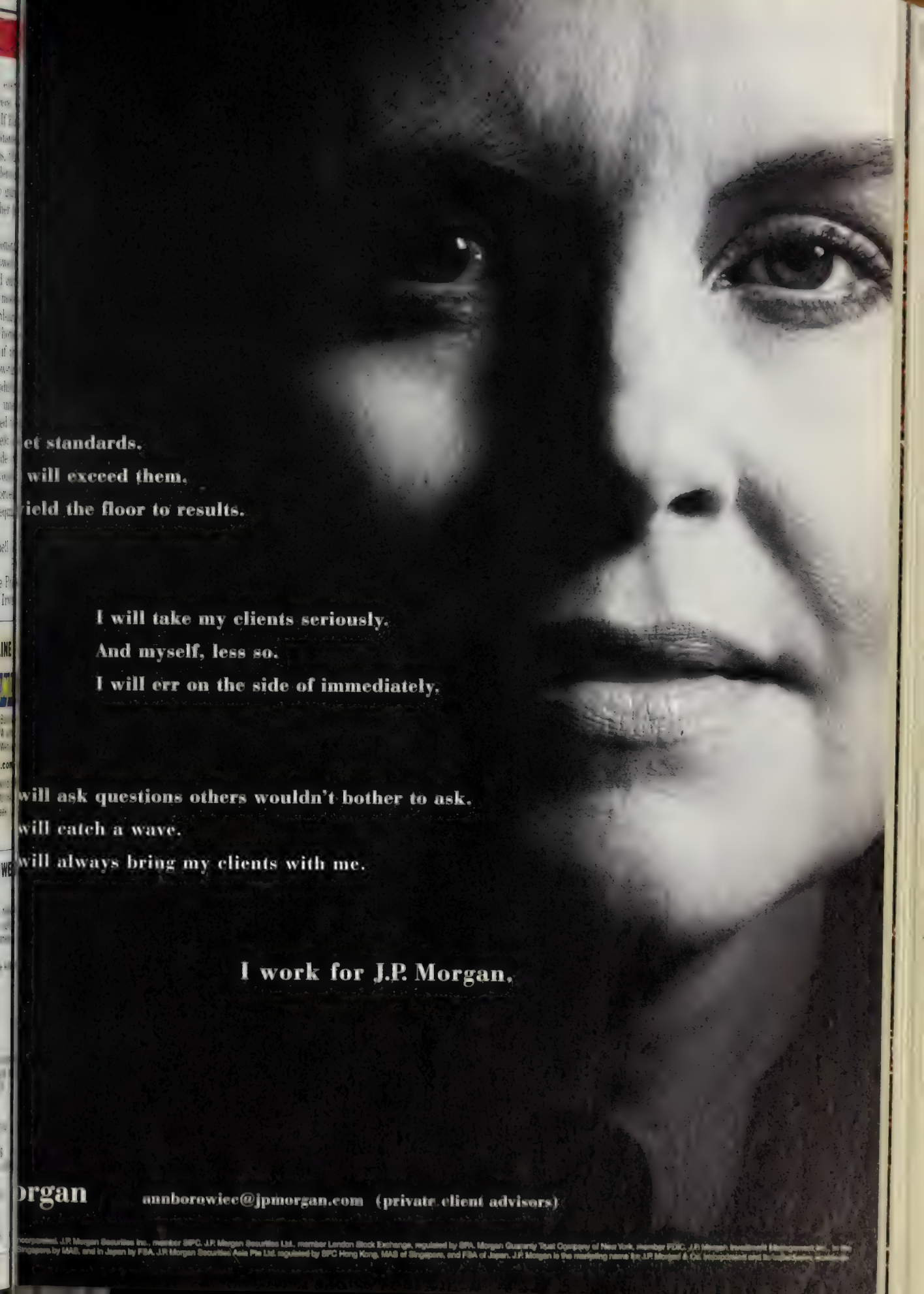
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NETSCAPE TIME

By Jim Clark with Owen Edwards
St. Martin's • 276pp • \$24.95

HOW THE WEB WAS WON

By Paul Andrews
Broadway Books • 352pp • \$27.50

MICROSOFT AS DEVIL —AND ANGEL

Silicon Valley entrepreneur Jim Clark has been throwing verbal darts at Microsoft Corp. for years. And no wonder. The first company he started, Silicon Graphics Inc., had its air supply threatened by the software giant. Then, after Clark co-founded browser pioneer Netscape Communications Corp., he watched while Microsoft targeted it for extinction. Now, with the publication of his book, *Netscape Time: The Making of the Billion-Dollar Start-Up That Took on Microsoft*, Clark gets to fire at will at Microsoft and its chairman, William H. Gates III. "For all his nerdy ways and offbeat charm for the press, I feel Gates is happiest when he is crushing the life out of companies that dare establish territory on the borders of Microsoft's sprawling dominion," Clark writes.

Clark's book is a blow-by-blow account of the wild early days of Netscape—in 1994 and 1995—when he and a band of young engineers helped launch the Internet craze with their Web-surfing software and a blockbuster initial public offering. The book is worth reading—and not just for what Clark has to say about Microsoft. It's laced with tangy observations on everything from venture capitalists (he calls them velociraptors) to personal wealth (he says money matters). And it captures the excitement of being at the epicenter of a technology shift that's changing the way business is done. Through Clark, we get a billionaire's-eye view of the thrill of IPO day and the pell-mell rush to be the first company to make something of the Web.

While Clark isn't obsessed with Microsoft, he doesn't hold back his criticism of it, either. He accuses Microsoft of withholding vital technical information from Netscape, of browbeating personal computer makers into dropping Netscape's browser, and of pricing its own browsers and other Internet software at zero—with the express purpose

of putting Netscape out of business. All of these charges Microsoft denies. Clark also warns about the dangers that Microsoft poses to the information-technology industry. He believes that its heavy-handedness is stifling innovation. Young companies are afraid to cross the giant for fear they'll be squelched in the same way Netscape was.

It was Clark who blew the whistle on Microsoft. In June, 1995, his lawyer sent a letter to the Justice Dept. that ultimately resulted in Microsoft's antitrust trial—which is now awaiting a judge's ruling. Clark says that he became alarmed after a meeting with Microsoft, when, according to the Netscape side, Microsoft execs offered to divide the browser market and threatened to withhold vital technology info if Netscape didn't comply. Microsoft denies it did anything illegal, calling it a routine discussion of potential cooperation.

Clark did not attend the meeting, so we don't get a definitive look at the crucial session in his book. In fact, Clark's account of the early interactions between the two companies evokes a complex relationship—and one whose fitful communications could be open to interpretation. Clark both feared Microsoft and saw it as a potential ally. Six months before the June meeting, in a moment of concern about his company's durability, Clark had even called up a Microsoft executive and offered an alliance that would have included an equity investment in Netscape. "I was frankly exhausted and completely strung out," Clark explains. In the end, nothing came of the flirtation. The two companies became enemies, and Netscape went down in history as Microsoft's punching bag.

Netscape is no longer on the ropes. It

was sold to America Online in March. But Clark believes that's too late to save other prominent startups from the same fate. His plan is to break Microsoft up into pieces: a company for operating systems, one for productivity applications, and another for Web sites such as MSN portal. And he warns against half-measures. "If, by the time this, the process of breaking Microsoft isn't yet under way, and you're used to say, 'You're in for trouble.'"

In Clark's admittedly partial view, Microsoft is unrelentingly right. But for Seattle journalist Paul Andrews, Gates and his software empire are nothing but evil. Andrews' new book, *How the Web Was Won: Microsoft Takes Down the Web*, portrays his cohorts as "Internet ideologues intent on bestowing their geeks' gee-whiz Web software on the putting public. And for free, at



the book sets out to reveal Microsoft's execution of a fraternity of engineers—foresaying the importance of the Web before Netscape was created and planned to embed it into the PC operating system.

Andrews ignores the charges Justice leveled against Microsoft. In his foreword, he examines the "end of the story" where

the point of his book—"which explore the inner workings and business of a company grappling with marketplace and defending itself from the threat of extinction in a highly competitive, ceaselessly evolving world." Geez, he almost makes you sorry for Microsoft.

Indeed, Netscape is the backbone of this telling of the story. At the end, Andrews suggests that Netscape have stolen intellectual property from the University of Illinois—where some of its founding engineers created breakthrough Mosaic Web browser. Somewhat, though, he appears to agree with most observers that no large place. (In his book, Clark scoffs at the suggestion that Netscape crit-

NETSCAPE'S CLARK LAMBASTES GATES'S COMPANY BUT ANDREWS SEEMS IN THRALL TO MICROSOFT

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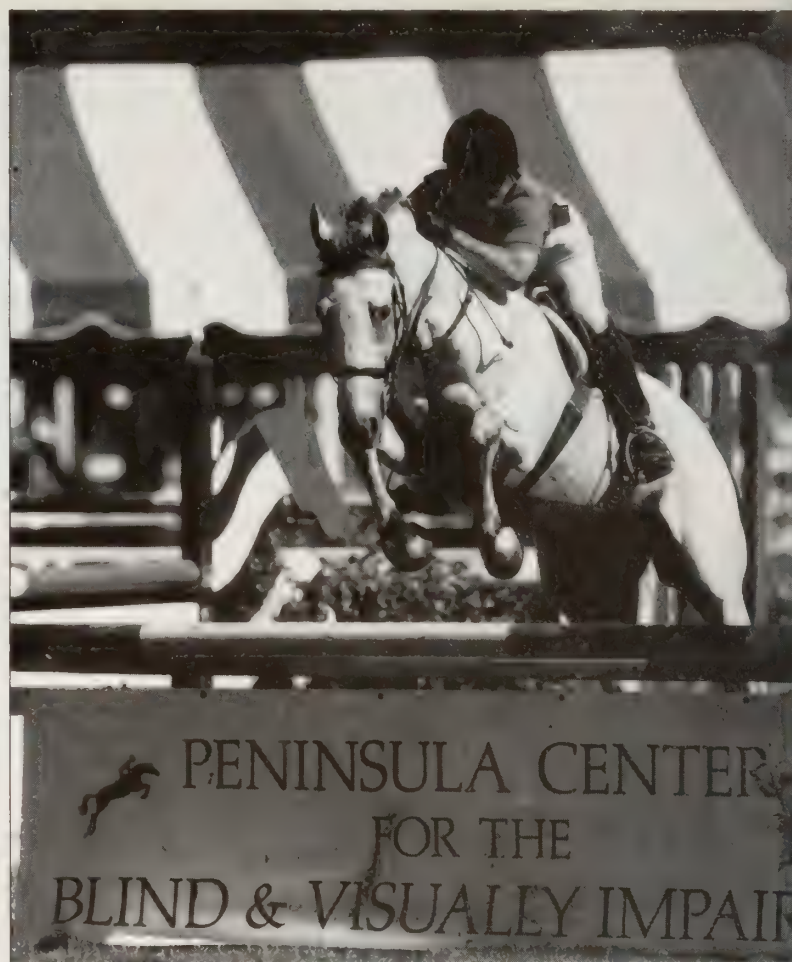
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point in the book, Andrews hints at a Netscape copied an idea from Microsoft's provision for so-called plug-ins from other developers to expose features of its Navigator browser. Netscape denies it.

bottom line for Andrews is that Netscape's executives were a bunch of liars. Sourced by their experiences with Microsoft competitors as Apple Computer Inc. and Go Corp., they misinterpreted the software giant's every generous word and gesture. He notes sympathetically that Microsoft executive Dan Rosen had his feelings hurt by Netscape's charges that Microsoft withheld crucial technical information. Said

Rosen: "I think, if we're being as open as a sign of good faith, we're being more for them than we did for anyone else."

If you believe this, you're going to be in the rest of Andrews' book, too. He puts together scraps of evidence about Microsoft's plans and internal discussions to make the case that it had an accurate, clear-eyed vision of its role in the Internet, starting in early 1994—maybe even earlier. Microsoft executive A. Ballmer wrote an E-mail message about the Web in late 1993, Andrews points out. Gates and his lieutenants debated the importance of the Internet at a retreat in May, 1994.

It doesn't matter, to Andrews that the paper trail of memos and E-mail is far short of establishing Microsoft as a bona fide Internet pioneer with a solid plan. And he quickly dismisses the fact that in Gates's 1995 book, *The Road Ahead*, Microsoft's chairman mentioned the Web only in passing. Through Andrews' book, he discounts or ignores any hint that Microsoft wasn't on top of things or may not always have had the purest motives. Meanwhile, he insists that Netscape and its allies had nothing positive to offer. They were just trying to tear Microsoft down. "It was negative energy versus positive flow," Andrews writes.

After a few chapters like this, you begin to wonder if you've entered the Twilight Zone. Has Andrews been hypnotized by Microsoft's public-relations effort? My advice is to skip it. It's simply not a very good book; Clark's is much better.

BY STEVE HAMM

Hamm covers the software industry.

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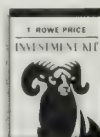
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BY STEPHEN H. WILDSTROM

WATCH YOURSELF, MICROSOFT

The free Linux operating system is still rough, but it's catching up fast

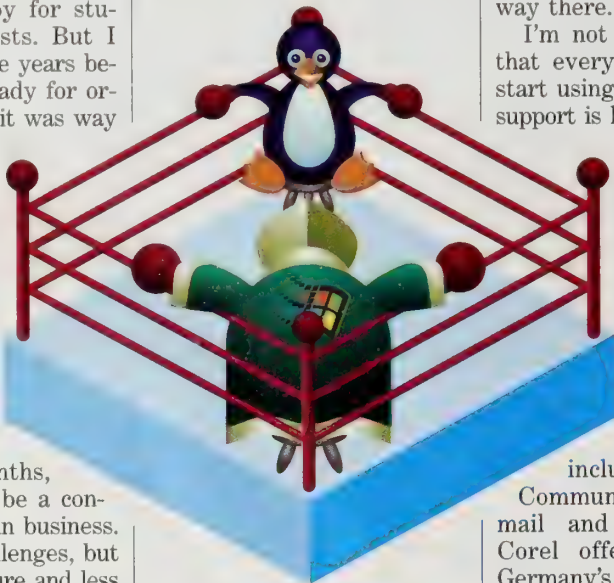
About six months ago, I first started playing with the Linux operating system, a piece of software that, like Microsoft Windows, does the basic chores of running a computer and connecting to the Internet. Linux was making a mark as an alternative to Windows NT for running the network workhorses called servers, and I thought Linux was a neat toy for students and hobbyists. But I thought it would be years before Linux was ready for ordinary folks, since it was way too difficult to install and use.

Boy, was I wrong. Linux' cheery Penguin logo isn't about to drive the Windows flag off of millions of desktops. But if it progresses as fast as it has in the past few months, Linux could soon be a contender, especially in business. It faces many challenges, but Linux is more secure and less crash-prone than Windows 95 or 98, and will run well on much less powerful hardware than Windows NT.

What changed things so quickly? Linux, distributed since the early '90s mainly by downloads from the Net, has been commercialized. The software remains free, but U.S. distributors, notably Red Hat (www.redhat.com)

and Caldera Systems (www.calderasystems.com), realized they could sell packages that simplify installation and use.

Caldera offers the better approach. Its OpenLinux 2.2 (\$39) includes PowerQuest's PartitionMagic, which makes it simple to set up a computer to offer a choice of Windows or Linux at bootup. Its Windows-based Linux installation is no harder than a Windows upgrade. I installed it easily on several computers, failing only on a Gateway Profile, whose flat-panel display didn't like the video settings I tried. Red Hat Lin-



ux 6.0 (\$75), while much improved, has a DOS installation procedure that requires a lot of knowledge of your machine's configuration. Macmillan Computer Publishing offers an enhanced version of Red Hat that includes Partition Magic, in three versions ranging from \$30 to \$80.

Linux is just the hidden core of the operating system,

which runs the programs and maintains the files. For a computer to be useful, it also needs a good user interface—that collection of icons, windows, and buttons that allows humans to interact easily with computers. Until a few months ago, Linux came with a crude graphical interface called X-windows. Many chores still required typing cryptic commands like "egrep" and "chmod."

I doubted whether the loose cooperative of programmers that maintains and extends Linux could design an interface as usable as Windows or the Mac. Wrong again. Linux comes with a choice of two interfaces, the Free Software Foundation's slick GNOME and the even slicker K Desktop Environment from the KDE Project. Neither is as polished or intuitive as Windows or the Mac, but both are about 75% of the way there.

I'm not about to suggest that everyone rush out and start using Linux. Hardware support is limited, with sound cards and inkjet printers being particular problems. The bigger impediment is the lack of ready-to-run software.

Both Red Hat and Caldera bundle text editors, games, and other programs, including Netscape Communicator 4.5 for E-mail and Web browsing. Corel offers WordPerfect. Germany's Star Division has StarOffice, a complete suite. After that, it gets sparse, though IBM is working on Lotus Notes for Linux.

This will keep most from giving up Windows soon. But Linux' growing popularity will entice software developers. And if you're adventurous, you might want to give it a try. I think you'll be impressed by the potential.

BULLETIN BOARD

SOFTWARE

CAN IT PUTT?

It can't actually carry you to golf clubs, but ultraCaddie from 3Wedge can make a Palm handheld computer perform a variety of services on the course. The program, available as a \$49.95 download

from www.ultracaddie.com, starts as an electronic scorecard. And like a human caddy who knows you game well, it also uses your performance history to suggest club selections. You enter distance and conditions for each shot and the result. When you sync your Palm with your Windows PC, the information is added to a database that feeds future advice. In addition, you can use the desktop program to analyze all phases of your game. The Palm part of the program also helps you keep track of all sorts of wagers during the course.



TRAVELIN' NORTON

Symantec has updated Norton Mobile Essentials, a handy program for business travelers. The new version is focused more tightly on the needs of mobile executives who need to connect to a corporate data center, and it allows them to create a variety of computer profiles to set up laptops for use in different locations.

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BY ROBERT J. BARRO

MY LUNCHEON WITH BONO



DEBATE:
The U2 rock star has a good grasp of economics—but he can't convince me that debt forgiveness for poor nations is a panacea

Robert J. Barro is a professor of economics at Harvard University and a senior fellow of the Hoover Institution (rjbweek@harvard.edu).

My Harvard colleague Jeff Sachs does many interesting things, but I was surprised when his secretary called to invite me to lunch with him and Bono, the lead singer of the rock group U2. Bono wanted to discuss the Jubilee 2000 campaign, which is a global movement aimed at canceling the international debts of the world's poorest countries. My first instinct was to decline, but I decided to check things out with my daughter, Lisa, who is an expert on rock stars. She said: "Dad, this is the coolest thing imaginable. I finally appreciate the fringe benefits from having a father who is a famous economist. Of course you have to go." Since I never miss a chance to impress one of my kids, I naturally went to lunch.

At the lunch, I said that I was an unlikely candidate to support Jubilee 2000 and that some leftist economists would be much more promising. Bono said that was precisely why he wanted to talk with me. He wanted to see whether hard-thinking conservative economists could be convinced of the soundness of the campaign. In particular, he was not interested in another global welfare project, such as Live Aid in the 1980s, but rather wanted to push debt relief as a way to promote sound economic policies. He even said that the relief would be contingent on a country's commitment to use the freed-up money for productive investments in a transparent economic environment.

TOP 10 LIST. I was shocked to hear these kinds of arguments from a rock star. Nevertheless, I recovered sufficiently to say that this commitment would be unenforceable and that debt relief would not be on the Top 10 list of policies for growth promotion in poor countries. More important were well-functioning legal institutions, pro-market policies, education, and macroeconomic stability. I mentioned the musical line "money for nothing" (sung by Sting, accompanying Dire Straits) and said that it applied to a number of ways in which a country obtained unearned resources. These included debt relief, debt default, foreign aid, and even natural resources, such as oil. Experience showed that all of these cases of free money were harmful for economic growth. I also argued that growth would be encouraged if a country gained a reputation for honoring foreign debts and other agreements.

Bono agreed that it was important for a country to fulfill its debt obligations, espe-

cially those that originated from sensible commercial transactions. But he and Sachs argued that most of the international debt of African and other poor countries stemmed from badly designed projects conceived by the World Bank, other international organizations, and donor countries such as the U.S. Many of these loans had been made to corrupt dictators who diverted the funds for personal gain. They noted that these debts could never realistically be repaid and that the overhang of interest payments prevented new international financing of sound investments. Bono said that the whole idea of the term "Jubilee 2000" was that it was a one-time happening and would therefore not require default on future debts. (I was worried here, because the Bible says that Jubilees are supposed to occur every 50 years.) **IMF FARCE.** Sachs was instinctively more pathetic than I to the campaign because he has never thought debt default did much damage to a country's reputation. While persuaded on this point, I was impressed when Sachs argued that we should ask for the debt relief not so much from the standpoint of the borrowers, who would be getting money for nothing, but rather from the perspective of the lenders. These creditors, especially the World Bank and the International Monetary Fund, would be forced to write down their Third World loans to realistic market values. This requirement might then induce the international financial institutions to make future loans on a sounder economic basis. Of course, the worst charade about debt valuation would not be covered by the Jubilee campaign—the latest IMF loan to Russia. The IMF agreed recently to lend another \$4 billion to Moscow just to finance an interest payment on the country's outstanding debt to the IMF. This allows the IMF to pretend that the loan had not been defaulted on.

In the end, I was not persuaded to add debt relief on the Top 10 list of growth-promoting policies for poor countries. But the arguments I heard were better than I had anticipated. Therefore, I am pleased to offer two restrained cheers for Jubilee 2000!

Anyway, at the close of the meal, I swapped two of my books for something much more valuable—Bono's autograph on four copies, one for each of my children. So, the lunch clearly succeeded in making me a hero with my kids. What's more important than that?

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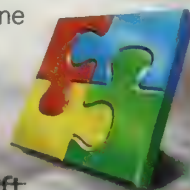


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BY GENE KORETZ

DEBATING THE NEW ECONOMY

Critics find new holes in the data

Back in 1987, economist Robert Solow observed that "you can see the computer age everywhere but in the productivity statistics." At the time, output per hour was still creeping higher at an annual rate of 1.1% or so.

Since 1995, however, it has been galloping forward at a 2% clip—reinforcing the view that a technology-driven productivity revival is for real. In fact, when Federal Reserve Chairman Alan Greenspan recently told Congress that the economy's potential growth rate was now 3%, he attributed two percentage points of that to a pickup in productivity.

None of this means that the productivity debate is settled. Indeed, two re-

industries as banking, insurance, wholesale trade, and business services is limiting measured productivity gains. Because much of the output of these industries is in intermediate products sold to other businesses, he notes, any true productivity gains should still flow through to final output measures and overall economic growth even if intermediate output is mismeasured.

As for the doubling of annual productivity growth to 2% since 1995, economist Robert J. Gordon of Northwestern University attributes it equally to three factors. The first is improvements in the measurement of inflation, via revisions in the consumer price index and a decision to use the slower growing producer price index rather than the CPI to measure roughly half of price changes for medical care.

The second factor is the normal pickup in labor productivity that occurs in periods such as 1997 and 1998 when output grows faster than its long-term trend. Because employers do not anticipate such surges, they are often reluctant to accelerate hiring when they occur—and in tight labor markets, such hiring is impeding anyhow.

Finally, Gordon's analysis indicates that an acceleration in long-term productivity growth of about 0.3% has indeed taken hold in recent years—but it has occurred entirely within the computer industry. On balance, he says, "there has been no productivity acceleration at all in the 98.8% of the economy located outside of computer and related technology manufacturing."

So what does all this say about the economy's potential growth rate? According to Gordon, the productivity explosion in computers, along with the effects of improved output measurement, suggest that the rate has indeed risen to 3%—a number that would be even larger if a true widespread productivity revival were eventually to develop.

JOB GROWTH, CANADIAN-STYLE

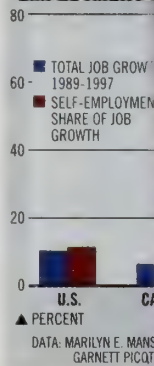
Self-employment surges in the '90s

Students of the U.S. and Canadian economies are puzzling over a sharp divergence in their patterns of job growth. As reported by economists Marilyn E. Manser and Garnett Picot in the *Monthly Labor Review*, self-employment accounted for some 80% of Canada's 6.5% net job growth from 1989 to 1997—compared with just 12% of

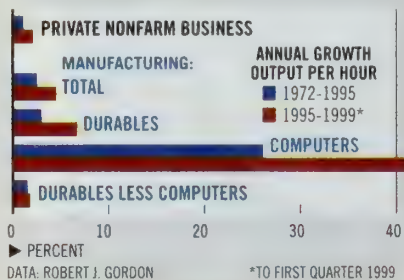
America's 10.4% growth over the

Why this difference, which was apparent in earlier decades? One possibility is that fast-rising personal tax rates in Canada made self-employment more attractive because it provides ways to shelter more income from taxes. The researchers also note that many new self-employment jobs in Canada in the 1990s were in the relatively high-profit business, health, and education sectors. But these observations, concede, hardly clear up the mystery which remains to be solved. Any id

TWO PATHS TO EMPLOYMENT



PRODUCTIVITY: GUESS WHERE THE ACTION IS



cent economic studies suggest that the evidence of widespread gains remains murky at best. Intriguingly, however, one concurs with Greenspan's estimate of a 3% potential growth rate while rejecting the New Economy paradigm.

Many believers in a productivity rebound point to the proliferation of new products in recent years. What they forget, however, writes Brookings Institution economist Jack E. Triplett in a recent issue of *Business Economics*, is that "to have an impact on productivity, the rate of new-product introductions must be greater than in the past."

In other words, the more products already in existence, the greater the number of new ones required just to keep productivity growth constant. As it is, he says, "there's no strong evidence that the rate of product innovation is rising."

Triplett also questions the common claim that underestimation of the output of such major computer-using service

FOREIGN AID'S FALSE PROMISES

Too often, it helps corrupt regimes

Over the years, billions of dollars of foreign aid has flowed from rich countries to poorer ones. Almost always such aid is given with the announced intention not only of reducing poverty but also of rewarding good policies in efficient, honest governments.

The trouble with such claims, however, report Alberto Alesina and Beatrice Weder in a new National Bureau of Economic Research study, is that it doesn't square with the record. Using data on aid flows from 1970 to 1996 and several measures of government corruption, the two economists find no evidence that aid from either individual countries or international organizations goes to less corrupt governments. In fact, by some measures, more corrupt governments tend to receive more aid.

As for individual donor nations, authors find that the U.S. does appear to favor democracies over dictatorships but still gives more assistance to corrupt governments. By contrast, Scandinavian countries are more generous to less corrupt governments, while international organizations seem to pay attention to the level of corruption aid recipients.

Thus, if donor nations and organizations are truly serious about encouraging "good governance," their aid policies may need some careful rethinking.

MES C. COOPER & KATHLEEN MADIGAN

THE FED MOVES, THE MARKET GROOVES

Wall Street likes the preemptive strike—but is it really a one-shot hike?

U.S. ECONOMY

O. K., class, repeat after me: $2+1=3$. Call it Alan Greenspan's new math, which the Federal Reserve chairman unveiled in his June 17 congressional testimony. That says: 2% productivity growth plus 1% growth in labor force equals the U.S. economy's 3% maximum noninflationary growth rate. Why is this lesson important? Because the June 30 hike in interest rates suggests that it may well be the key to monetary policy in the quarters immediately ahead.

The old math, which many economists are abandoning (page 30), assumed slower productivity growth, and thus a noninflationary limit of about 2¼%. Although the precise numbers for productivity and the labor force continue to spark debate over what the economy's growth limits really are, Greenspan now has given a ballpark figure of where he

himself stands on the issue. That's important because maximum noninflationary growth is Greenspan's oft-stated goal for policy, and apparently, the Fed has decided that the economy's 4% growth rate has become too much to handle.

As a result, the Fed lifted the target level for its federal funds rate, the overnight rate for interbank borrowing, by a quarter-point, to 5%—the first rate since March, 1997 (chart). Policymakers chose to ease the largely symbolic discount rate at 4.5%. And to move that eased the markets' fears about the Fed's policy for further hikes, the Fed shifted its official policy predisposition to neutral, from one that had been leaning toward tightening. Both stocks and bonds responded sharply. The Dow Jones industrial average gained 155 points on the day, and the 30-year Treasury yield fell to 5.96%.

NEVER, THE MARKETS

may be reading too much into the shift to a neutral bias. The Greenspan Fed has previously changed its official policy stance back to neutral after lifting rates. Moreover, the last sentence of the chairman's statement left the door open for further hikes if needed: "The Committee, nonetheless, recognizes that in the current dynamic environment, it must be especially alert to the emergence, or potential emergence, of in-

flationary forces that could undermine economic growth." And unless the data show that the economy is slowing to the 3% gauntlet that Greenspan has thrown down, more rate hikes may be forthcoming.

Further tightening is likely especially since last fall's three-quarter-point rate cuts added significant stimulus to an already hot economy. In his June 17 testimony, Greenspan referred to last fall's downward adjustments in rates as an "emergency injection of liquidity." But with Asian economies now stabilizing, and with the outlook for world growth improving, at least partly, and perhaps all, of that extra liquidity is not needed, particularly since U.S. growth continues to barrel ahead. Indeed, the Fed said that "the full degree of adjustment is judged no longer necessary."

Keep in mind that last July, before the emergency easing, the Fed leaned toward tightening, given the economy's strong growth and the drop in the unemployment rate to 4.5%. Since then, the economy has grown at a 5.2% pace in the fourth and first quarters, and the jobless rate has dropped further, to 4.2%. With the economy growing at a 4%

pace, the jobless rate would very likely dip below 4% by the end of the year, a rate all economists agree would spark inflation.

Further labor-market strains were the fear that led to last summer's leaning toward higher rates. And despite the Fed's acknowledgment that "strengthening productivity growth has contained inflationary pressures," it remains the Fed's biggest fear. Even with the recent slowing in wage growth, that concern was explicit in Greenspan's June 17 remarks. "Should labor markets continue to tighten," he said, "significant increases in wages in excess of productivity growth will inevitably emerge." He clearly endorsed preemptive policy as a means to thwart such pressures, and preemptive action is exactly what the Fed took on June 30.

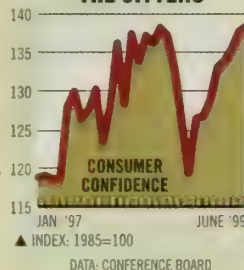
THE DRIVING FORCE

behind the labor-market tightening is the unrelenting strength in domestic demand, led by consumers. The problem is that the latest readings for household outlays and confidence show no sign that consumers are cutting back (chart). And the

THE FED TAPS ON THE BRAKES



RECOVERING FROM THE JITTERS



economy will not slow down until consumers do.

Households in June were the most upbeat they have been in 30 years. The Conference Board's Consumer Confidence Index rose for the eighth month in a row, to 138.4, as households gave an improved assessment of their present economic situation, as well as their view of the next six months. The June increase in confidence was significant because the index has now regained all of the ground lost last fall amid the global and U.S. financial market turmoil.

Consumers continue to spend at a pace in excess of their income growth, primarily because of wealth gains from rising stock values and home prices. Greenspan says that such wealth accounts for one percentage point of the economy's 4% growth, and that even if the growth in capital gains ends soon, enough stimulus from this source remains in the pipeline to fuel outsized consumption growth for months to come.

MOST RECENTLY, inflation-adjusted consumer spending on goods and services jumped 0.6% in May, after dipping 0.1% in April. Second-quarter outlays are on track to grow at an annual rate of between 4% and 5%—less than the first quarter's blistering 6.7% pace, but a good deal faster than the 2% to 3% pace at which real aftertax income appears to be growing.

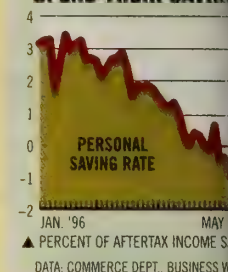
As a result, the saving rate continues to plumb deeper into negative territory (chart). Last fall, for the

first time in the postwar era, U.S. households whole began to spend more than the income they were generating. And in May, the saving rate fell to a record low of -1.2%, as consumers allowed stock market gains, which are not counted in the personal saving rate, to supplant more traditional forms of saving.

The first victim of the Fed's tightening is likely to be housing. Rising mortgage rates may already be crimping demand, given that sales of both new and existing homes fell sharply in May. Since the end of April, 30-year fixed mortgage rates have risen from 6.9% to 7.6%, according to the Federal Home Loan Mortgage Corp. New home sales fell 5.1% in May to an annual rate of 888,000, and the inventory of unsold homes relative to demand rose to highest level in a year and a half, a sign that housing starts may begin to slow.

Of course, that seems to be exactly what the Fed is looking for. Regardless of whose math you believe, Greenspan & Co. have given us fair warning: If economic growth doesn't quickly slow down to a less robust pace, the policymakers will be back with further rate hikes to make sure it does.

CONSUMERS CONTINUE TO SPEND THEIR SAVINGS



JAPAN

HOT GROWTH WAS ONLY A MIRAGE

The growth spurt in Japan's real gross domestic product in the first quarter took analysts and investors by surprise. But the surge looked questionable when put under the microscope, and Japan's economy remains quite fragile.

First-quarter real GDP jumped at an annual rate of 7.9%, the strongest quarterly gain in three years. But government spending soared at a 48% pace, a result of 1998's stimulus package. That accounted for about half the advance. And the seasonal adjustment process seems to make every first-quarter real GDP look strong even though the raw data show significant declines.

Real GDP is back to its level of early 1998. The key question is where it goes from here. The data so far in the second quarter show the growth spurt was not repeated in the spring, but that a recovery is taking hold.

The best news is that Japanese consumers, whose real spending grew 4.8% in the first quarter, continue to buy. Household spending rose an impressive 3.9% in May, the third rise in a row.

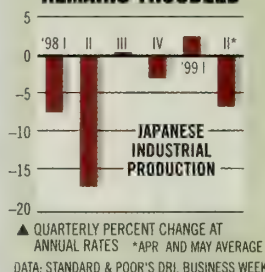
However, the labor markets are still in disarray. The jobless rate in May fell to 4.6%, from a record 4.8% in April, but most of the jobs created were only part-time. The job-to-applicant ratio dipped to 0.46 from

0.48. And real wages are barely above their year-ago level.

In addition, manufacturing remains in trouble. Industrial production unexpectedly fell in May, slipping 0.7% to its lowest level in five years. Output is on track to fall an additional 6% in the second quarter (chart). And the inventory-to-sales ratio rose again in May, suggesting factories will have little need to boost output levels over the summer. And housing starts were down in both April and May.

Policymakers have indicated that they will wait until fall to decide on assembling another stimulus package. If consumer spending keeps rising, they may opt again for more pump-priming. Investors at least are betting that the recovery is real: The Nikkei stock index is up almost 27% this year.

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HANDLING THE HOT-ROD ECONOMY

Higher growth rates have wide policy implications

COMMENTARY By Michael J. Mandel

In some ways, the Federal Reserve's June 30 quarter-point rate hike seems like a retreat from the New Economy view of the world. It looks perhaps as if the big, bad Fed is back on the job again—fighting inflation and holding down growth.

But despite this light tap on the economy's brakes, Fed Chairman Alan Greenspan still believes in the New Economy—and so do a growing number of other Washington policymakers. After years of dispute, there is a new consensus forming around the proposition that the economy's rate of sustainable growth is 3% or greater, much higher than most economists had considered possible without igniting inflation.

For monetary policy, the new consensus means that the Fed is less likely to raise rates again, despite tight labor markets and strong growth. Following the hike, the Fed's policy-making committee issued a statement saying that there was no longer an upward bias on future rate changes, noting that "strengthening productivity growth has contained inflationary pressures."

Without direct signs of inflation, the June 30 hike was mainly an attempt to bring the rate of economic growth back into the safety zone of around 3%—after hitting 6% in the last quarter of 1998 and 4% in this year's first quarter. Many forecasters already expect the second quarter to be under 4%. So, if the gross domestic product slows to between 3% and 3.5%, then the Fed will not have to move again.

NEW CONSENSUS. The notion that the economy is capable of a new level of noninflationary growth is permeating the budget debate as well. President Bill Clinton's latest budget proposals are based on the belief, in his own words, that technology "has given us enormous increases in productivity." Policies which were formerly unthinkable—such as paying down the national debt, fully funding Social Security, or making sizable tax cuts—now seem well within reach.

Leading the new consensus is Greenspan. In his congressional testimony on June 17—the same speech in which he signaled the rate hike—Greenspan also indicated his belief that the U.S. economy could sustain roughly a 2% growth rate in productivity and a 3% growth rate in GDP. These numbers represent a remarkable upward shift from the sluggishness of the 1970s and 1980s, when 1% growth for productivity and 2% for GDP were the norms.

The record of the past couple of years has even impressed

some of the biggest New Economy doubters. Until recently, for example, economist Alan S. Blinder had argued there was no evidence that long-term sustainable growth had risen above 2.3%. Now, like Greenspan, the Princeton University professor, who is a former Fed vice-chairman, sees the sustainable growth rate at 3%—and possibly even higher. "I can't rule out that we could be at a 3.5% or 4% growth rate," says Blinder.

Even budget forecasters—who were burned in the e



by excessively optimistic
estimates of growth—are fi-
pping their estimates.
example, in its latest set
dget projections, the Of-
f Management and Bud-
OMB) raised its estimate of
tial GDP growth over the
three years from 2.5% to

That's a major reason
the budget surplus is now
cted to be a trillion dol-
arger than predicted just
months ago.

ING SHAME. Admittedly,
s still below what the new
ensus suggests. What's
, the revision has not tak-
ace across the board: The
is projecting that annual
activity growth will fall
to 1.4% beginning in 2003.
policymakers really believe
conservative forecasts,
any actions based on them
l prevent the economy
fulfilling its real potential.
a crying shame if we could
at a 3.5% rate and we
let ourselves grow 2.5%,"
Blinder. "Underperform-
growth is just as bad as
much inflation."

ill, there are some wild
s that could cause the Fed
ange direction. One of the
serious potential problems
d be a pronounced slow-

n in the high-tech sector. That would, in fact, cut off
fuel for the New Economy growth-and-productivity ma-
e. The rapid growth of information technology has con-
tated one-third of growth, cut half a point or more off in-
on, and provided the bulk of the productivity gains.

en, there are the mixed signals from the labor market. De-
an unemployment rate of 4.2%, wage growth seems to
decelerated in the last year. Worker compensation, as mea-
d by the employment cost index, has risen by 2.9% over
past year, down from 3.3% a year earlier, for example.

evertheless, the pool of available labor has been
dramatically shrinking and now is as small as
it was in the mid 1970s. And
some forecasters,

A HANDY GUIDE TO NEW-ECONOMY POLICY

*Here are factors that will
determine how the New Economy will affect
monetary and fiscal policy*

SUSTAINABLE RATE OF GROWTH More economists
accept that the economy can safely grow at a 3%-
plus annual rate. This higher sustainable rate leads to
bigger budget surpluses and fewer rate hikes.

THE NATURAL RATE OF UNEMPLOYMENT Based
on recent experience, the unemployment rate that
triggers inflation could be between 4.5% and 5.5%.
The lower the trigger rate is, the less the Fed needs
to worry about inflation.

BUDGET SURPLUS Using the surplus to pay down
the debt, rather than cutting taxes or increasing
spending, modestly boosts the sustainable growth
rate by lowering long-term interest rates.

HIGH-TECH INVESTMENT Soaring high-tech invest-
ment has significantly increased the level of sustain-
able growth by changing how businesses operate and
boosting productivity. If that slows, policymakers
would likely revise downward their estimates of sus-
tainable growth.

GLOBAL ECONOMY A rebound in world growth,
putting pressure on commodities prices and using up
more of the current excess global capacity, would
make inflation more likely. The result would be a
need for additional interest-rate hikes.

sion of the 1990s—followed attempts by a central bank to
bring down asset prices. What's more, to the degree that the
rising equities markets have made it easier for innovative
new companies to raise money, an attempt to bring down a
perceived stock market bubble could have the unintended
side-effect of crimping innovation—or cutting off the high-
tech boom.

Certainly, managing economic policy through a period of
rapid structural change isn't easy. "When there's a swing, peo-
ple don't recognize it for a while," says Blinder. But Washing-
ton finally seems to be getting its mind into the New Economy.

*Economics Editor Mandel covers the New Economy for
BUSINESS WEEK.*

including St. Louis-based
Macroeconomic Advisers, still
argue that the natural rate of
unemployment is closer to 5.5%
than to the 4.5% that some
economists now use. If they
are right, and wage growth ac-
celerates again, the economy
would have to be slowed to
somewhere below the sustain-
able rate in order to keep in-
flation under control.

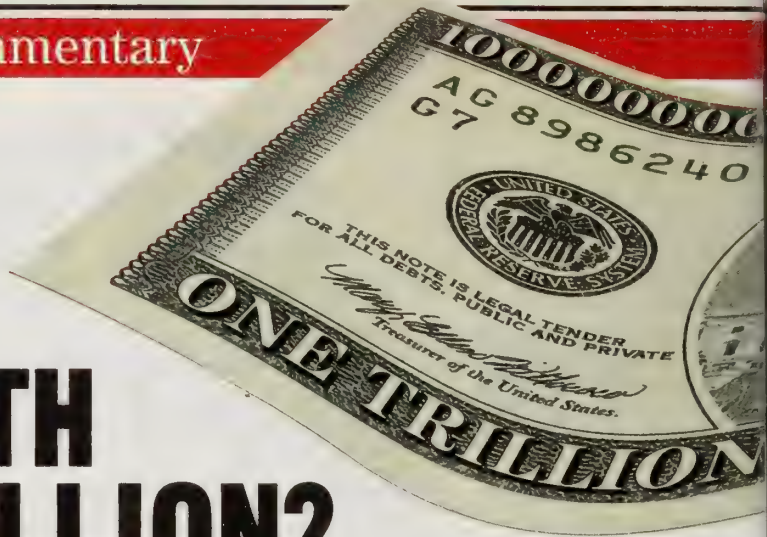
Finally, the real imponder-
able is whether the Fed feels it
necessary to raise rates in or-
der to rein in a galloping equi-
ties market. Over the past year,
surging prices for stocks have
helped fuel much of the con-
sumer spending that has kept
the expansion alive. If
Greenspan was aiming at this
equity bubble on June 30, he
missed: The Dow Jones indus-
trial average jumped 155.45
points, the S&P 500 rose 21.21,
and the NASDAQ advanced by
41.04. Without some pullback,
Greenspan and the Federal Re-
serve could be tempted to raise
rates to prick what seems to
be an asset bubble.

The Fed would be wise to
resist that temptation. Some
of the greatest central bank
policy failures—including the
Great Depression of the 1930s
and the deep Japanese reces-



WASHINGTON

WHAT DO YOU DO WITH A COOL TRILLION?



Clinton's plans for the budget surplus could sharply limit spending options for years to come

Funny how \$1 trillion focuses the mind. Until recently, Washington was locked in an endless debate over the role of government in an era of deficits. Even in 1998, when surpluses first appeared, pols still were playing the same old game: What Democratic spending programs would have to be cut to fund which GOP tax cuts? How should Social Security

The startling possibility—and it remains only that—of surpluses as far as the eye can see may transform economic policy, opening new options both this year and beyond. “We’ve moved into a different era,” says Urban Institute economist C. Eugene Steuerle. “This is going to have extraordinary implications for both fiscal and monetary policy.”

Suddenly, Washington seems ready to shift trillions in general revenue dollars to Social Security and Medicare, ensuring paper solvency well into the next century. And both President Clinton and the GOP are backing a dramatic buydown of the public debt. Money may be available to shore up Social Security and Medicare without painful benefit

cuts. And the Administration even hopes to add prescription-drug coverage to Medicare, to be funded partly by the new abundance. The huge surplus may even bring the Administration and the GOP together on a tax-cut deal later this year, President Clinton told *BUSINESS WEEK* on June 29 (page 34).

Although long-range budget forecasts are notoriously shaky, there’s no question that the economy’s surprising surge has created a new engine for future surpluses. Just three years ago, budgeters thought revenues for fiscal 1999 would be \$1.68 trillion.

Now, with growth hitting 4.3%, they figure they’ll be \$100 billion higher. Over the next 15 years, according to the Administration, cumulative surpluses will near \$6 trillion—\$1 trillion more than predicted just five months ago.

The President used the release of the new estimate to float a series of proposals that would define the federal

budget for years to come. He wants to use the surpluses now building up Social Security to wipe out the \$3 trillion public debt over the next 15 years. Buying back Treasury securities would save the government \$100 billion a year in interest costs. All those savings would be used to shore up Social Security later on.

BOOMER BONUS. Clinton also proposes creating a special category of spending for education and children’s programs that, like Social Security and Medicare, would be treated separately from ordinary budget items. Over 15 years, Administration would allocate \$156 billion for such programs, while increasing defense and environmental protection by \$250 billion and cutting taxes by \$250 billion.

But Clinton reserves the bulk of the New Economy bonus for baby-boomer retirement needs. Some \$790 billion would be pumped into Medicare, while \$600 billion would be shifted to Social Security.

There are, of course, other options for reordering spending priorities, given the new outlook. Republicans favor diverting some of the newfound money from the Federal coffers in the first place by cutting income taxes by close to \$1 trillion over 10 years. “Republicans think if you give this money back to the people who earned it, they would have better use for it,” says Lawrence B. Lindsey, a top economic adviser to

MEDICARE
CLINTON Clinton’s new voluntary benefit for seniors would cost \$794 billion in income taxes and revenues into the Medicare program to assure its solvency to 2020.

GOP Limit a benefit to the poor elderly. Provide new incentives for seniors to join managed care plans instead of traditional fee-for-service Medicare.

TRILLION-DOLLAR DREAMS

How the Administration and the GOP would use the windfall surplus

DATA: OFFICE OF MANAGEMENT & BUDGET, BUSINESS WEEK

SOCIAL SECURITY

CLINTON Use \$3.1 trillion in excess payroll tax revenues to pay off the national debt over the next 15 years and use interest savings to shore up the Social Security Trust fund.

GOP Use surpluses to help shore up the Social Security Trust fund, but allow workers to shift a portion of their payroll taxes to private investment accounts.

be trimmed to assure its solvency?

But thanks to the massive tax receipts being generated by the New Economy boom, the debate is changing. On June 28, the Office of Management & Budget issued new estimates showing that stronger growth—2.5% vs. the previously predicted 2.3%—could boost the surplus by \$1 trillion over 15 years.



Governor George W. Bush. Like Administration, Republicans would like more on defense and on some domestic programs, pay down the debt, protect Social Security by stopping "rowing" payroll taxes for general government spending.

It's not hard to see a compromise. If Clinton accepts a bigger tax

Republicans might settle into a limited health care drug benefit, modest hikes in domestic spending. Both could use clever financing to paper over Social Security and Medicare solvency.

BIND. But would Clinton and October compromise result in fiscal policy that fits the New Economy? After all, ending the expansion is the key to the vicious cycle that brought the U.S. to Promised Land of lull.

On the plus side, economists think the single biggest element

of both camps' plans—shrinking debt—will benefit the economy. It will lower real interest rates, encourage investment, reduce borrowing from abroad, and increase living standards," Harvard University economist Benjamin M. Friedman.

But there are problems with retiring the debt entirely. Without government borrowing, there would be no Treasury bond market and the Federal Reserve would lose a vital monetary tool: buying and selling Treasuries to adjust liquidity.

In addition, the single-minded focus

on debt repayment means "a very tight fiscal policy," notes an adviser to Presidential hopeful George W. Bush. "Clinton is talking about a surplus that would be close to 3% of gross domestic product." Democrats agree. "This will constrain policymaking," says former Congressional Budget Office Director Robert Reischauer.

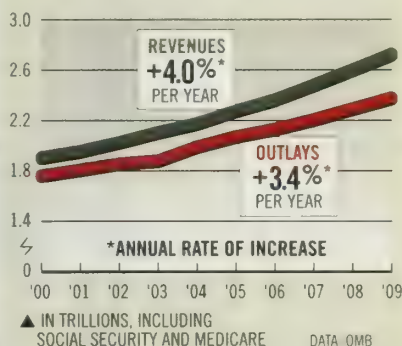
Liberals are furious. They insist that debt elimination should not take precedence over education, training, and other human-capital investments. That's how states have used their surpluses in recent years. Jeff Faux, president of the Economic Policy Institute, a labor-funded think tank, says the government should spend up to \$100 billion a year more on such programs because they boost productivity and help the poor benefit from growth.

"In '93, Clinton told us that while public investment was important, we had to get the deficit down. Then we were told we had to balance the budget.

Then we had to run surpluses to take care of Social Security. Now, we have to get the debt to zero before we can get poor kids into Head Start. This is crazy."

Another consequence of the Clinton and GOP plans would be to cut off debate over Medicare and Social Security reform. With surplus money to keep the programs operating as they do now, politicians are disinclined to revisit touchy subjects such as shifting some Social Security funds into marketable securities or trimming benefits.

THE GROWING SURPLUS



That, warn critics, leaves the retirement of 76 million baby boomers a potential time bomb for the 21st century. Without structural changes in Social Security, and with an added drug benefit for Medicare, Washington will be spending nearly 80% of its resources on aging baby boomers by 2040. "There's almost nothing left for anything else," says Steuerle.

The sudden appearance of a Second Peace Dividend—this one generated by

technological innovation, strong productivity growth, and globalization—has Washington giddy. When the delirium wears off, though, policymakers may take the time to consider more imaginative ways to use the windfall—and ponder whether it will materialize on schedule.

By Howard Gleckman, with Lee Walsch, in Washington

OTHER SPENDING

CLINTON Set aside \$156 billion over 15 years for child care and education programs. Other increases in funding for environmental protection, veterans, and defense.

GOP Focus spending hikes on defense and increase some education spending.

Q & A

'I DO BELIEVE IN THE NEW ECONOMY'

President Clinton has a plan to spread the wealth

On the eve of a barnstorming tour to promote his new Medicare plan and unveil an initiative to bring the New Economy boom to inner cities and hard-hit rural areas, President Clinton sat down with White House Correspondent Richard S. Dunham on June 29. For a more complete text, see the July 12 issue at www.business-week.com.

Q: Do you think the New Economy is as big a boon as its backers claim?

A: I do believe in the New Economy. Technology is rippling through every sector of economic activity in ways that have given us dramatic increases in productivity and potential for growth without inflation. And I think most models have not accurately measured it. Therefore, the most important thing for government policy is to be fiscally responsible, to create the conditions where people can prosper, and then to do things that will accelerate the trends that are already under way.

Q: Can the economy sustain its current high growth rate?

A: The opportunities are stunning. If we can adapt the world trading system on the theory of leaving no one behind and making maximum use of new technologies, I think this thing could go on indefinitely.

Q: What is Federal Reserve Board Chairman Alan Greenspan's role in the new cycle of prosperity?

A: Mr. Greenspan and the Fed do a perfectly good job, and we've had a good partnership by recognizing each other's appropriate roles. No one believes that we have completely repealed the traditional laws of econom-



SETTING PRIORITIES “We don’t want to ignore Medicare and Social Security liabilities or the enormous opportunity to pay off debt”

ics, that we have completely repealed any tendency toward inflation, or that we’ve completely repealed the business cycles. But we’ve dramatically improved [our chances of growth without inflation] through this technological revolution.

Q: What about another Fed term for Greenspan?

A: I haven’t talked to him [about that]. I don’t even know if he’s interested.

Q: Let’s go back to the economic boom. Why hasn’t it extended to run-down inner cities and distressed rural areas?

A: The business community is not fully aware of the opportunities it actually has to make money. And frankly, [there are] still some greater risks in these areas, which we ought to try to overcome by putting in place... much more incentive to invest.

Q: Some corporations have invested in poor areas, but others are sitting on the sidelines. What can you do to encourage more companies to take the plunge?

A: First, make sure that all the people who make investment decisions understand that there are very gifted, hardworking, very creative people there in these communities. Second, we hope to build bipartisan support for

sage of the New Markets Tax Initiative, which will make it more attractive for people to invest in these areas by giving them a credit of up to 25% and making certain investments eligible for loan guarantees of up to two-thirds of total investment.

Q: The Office of Management & Budget has released new estimates showing the surplus over the next decade may be bigger—by about \$1 trillion—than had been expected just a few months back. Does this increase the odds that you and Republicans can cut the budget deal on entitlement reform and tax cuts?

A: When you have more money than you thought you were going to, you should make it easier to have an omnibus agreement. I want to caution, however, that what we have this year [is not enough]. Everything else, we

projecting. [Still], this should make it easier to make an agreement on Social Security, Medicare, and paying down the debt—and still have funds for education, medical research, tax cuts, you name it.

Q: So all these things are possible now...

A: We [still must] have our priorities in order. We don’t want to go off and have a big tax cut and ignore Medicare and Social Security liabilities or the enormous opportunity to pay off the debt over the next decade. This idea should have appeal to Republicans as well as Democrats. And I still believe that a big portion of tax cuts ought to be directed toward helping more people toward their retirement. My proposal deserves some consideration from a Republican majority because I think it’s good social policy, and it’s a good way to increase savings.

THE TUNDRA IS HOT, BUT DETROIT STAYS COOL

Toyota's popular new pickup isn't fazing the Big Three—yet

Baron Solomon, a secretary who lives north of Detroit, has always been a loyal buyer of hometown cars. So when she decided to trade her 1992 Oldsmobile 88 for a pickup, she test-drove a GMC Sierra and a Ram. What did she buy? A 2000 Toyota Tundra. "It drives as if it's a luxury car," she gushes. "And it's made in Indiana."

Keep up, Detroit. It may have taken a Motor Corp. a few tries, but with the Tundra—which arrived in show-

rooms in early 1999—the Japanese auto maker seems to have finally broken into the U.S. market for building a profitable business. The new competition from Toyota threatens Detroit's last bastion of domestic dominance—and the Detroit automakers that has fattened the Big Three's bottom lines. "The Japanese are now winning where Detroit makes its money," warns Burnham Securities Inc. auto analyst David B. Healy.

WINNING START. In the first month, Toyota sold 7,800 Tundras—as many as Ford was able to sell in a full year with its F-150 pickup, which was never big enough to take on Detroit's Big Three. The new pickup roared off the production line so fast that Toyota President Fujio Cho is already giving a "70% probability" that the carmaker will build a new U.S. plant, most likely next to its Princeton, N.J., pickup factory. "My job is to make that probability a reality," says Don Esmond, Toyota's vice-president of Toy-

ota Motor Sales USA in Torrance, Calif. "I sure would like to have more pickups, and there's a lot of cornfields there in Indiana."

So is there panic in Detroit? Well, not exactly. Sure, Big Three engineers are dissecting the Tundra like a frog in biology class. And yes, Detroit executives speak in reverent tones of Toyota's stellar quality and the Tundra's potential. But they're also quick to note Toyota's past pickup failures and point to its paltry plan to build only 100,000

pickups a year in the U.S. and haul in the bulk of their profits from those big pickups and sport-utility vehicles. Analysts estimate, for instance, that Ford Motor Co. makes \$10,000 on each F-Series pickup it sells—a bracing \$40,000 a year.

What's more, Detroit should not mistake Tundra's go-slow launch for modest ambitions. After all, the auto maker started with a Kentucky factory capable of building 150,000 Camry sedans in 1988. Today, that factory makes 500,000 vehicles—and the Camry is America's No. 1 car. The Tundra is following that launch model. "Toyota is in the first inning of its truck strategy," says Wasserstein Perella analyst Scott Merlis.

SUV SPAWN. The Tundra will also spawn a sport-utility, which will hit the road in the fall of 2000.

That could present an even greater threat to U.S. auto makers, since chomped hulks such as the Lincoln Navigator generate \$15,000 in profit per vehicle. Transferring Tundra's lauded carlike ride to a big SUV could set a new benchmark. Warns Bulin Group auto consultant John Wolkonowicz: "That's what Detroit should worry about."

For now, the biggest worriers seem to be Toyota dealers who are desperate for more of the pickups. Supplies are so short, particularly for the four-wheel-drive version, that dealers are selling Tundras at \$1,000 over the sticker price. "We can't get enough of 'em," says Southfield (Mich.) Toyota dealer Martin "Hoot" McInerney. "It's a hot S.O.B." If the Tundra keeps up its sales pace, Detroit will no doubt think of several more expletives-deleted to call it, too.

By Keith Naughton in Detroit

How Toyota Stacks Up

	TOYOTA TUNDRA	FORD F-150	CHEVROLET SILVERADO	DODGE RAM
V6 MODEL STARTING PRICE	\$15,415	\$15,390	\$15,995	\$15,435
V6 HORSEPOWER	3.4-liter/190	4.2-liter/205	4.3-liter/200	3.9-liter/175
V8 MODEL STARTING PRICE	\$22,670*	\$16,640	\$19,110	\$18,190
V8 HORSEPOWER	4.7-liter/245	4.6-liter/220	4.8-liter/270	5.2-liter/230

*Starting V8 Tundra is four-door, extended cab

DATA: AUTO MAKERS

Tundras annually. Even at full capacity, the Indiana plant could produce only 150,000 this year, analysts say. "Certainly, they are offering a much more competitive product now," says Ford Div. President Jim O'Connor. "But ultimately, customers will vote, and we still feel we'll win that election."

Are Detroit execs underestimating the challenge? "They are still not as concerned as I'd like them to be," says auto consultant Wesley R. Brown of Nextrend in Thousand Oaks, Calif. Per-

TOYOTA TUNDRA



EXECUTIVE SUITE

A BOARD TOO STRONG FOR ITS OWN GOOD?

Chairman Rosen and his team run the show—making the CEO search more difficult



Compaq Computer Corp.'s board of directors has never been a bunch of shrinking violets. It bounced co-founder Joseph R. "Rod" Canion when the company started to flag in 1991 and did the same thing to Chief Executive Eckhard Pfeiffer in April. At the time, Chairman Benjamin M. Rosen installed himself and Directors Frank P. Doyle and R. Ted Enloe III as a temporary management team—not mere caretakers. True to their word, the trio in short order restructured distribution and reorganized operations. Then, on June 29,

they sold 83% of Compaq's AltaVista Co. Internet unit to Web holding-company CMGI Inc. for \$2.3 billion—indicating a new twist in the company's Web plans.

Problem is, Rosen & Co. might be doing too much—making it harder to attract a top-flight exec for the vacant CEO suite. The board's first choice, Continental Airlines Inc. President Gregory D. Brenneman, dropped out of the running on June 28. Brenneman would not comment, but a source familiar with the negotiations says talks broke down

absorbing Digital Equipment Co. There are easier ways for seasoned execs to make bigger bucks at Internet startups. Another hitch: Compaq is looking for a CEO at the same time as Hewlett-Packard Co., which has the advantage of being in Silicon Valley, Houston.

The board can't afford to let its drag on much longer: Compaq is losing momentum fast. Although it's still a PC-market leader—with a 14.3% share of PCs shipped worldwide in the quarter—its shipments grew only

when it became parent that he wanted to stay a man and "a puppeteer." didn't sit well with the airline exec, the source says. In order for Compaq to achieve maximum shareholder value, they need to recognize there's a hole in front of them, it's Ben." Compaq had no comment. Compaq's search was going difficult no matter what. First, there are only a handful of computer executives capable of turning around such a complicated business. Compaq competes across the computer market and is

CMGI GETS ALTAVISTA—AND A NEW STRATEGY

It's one thing to be a brilliant financial engineer in the Internet economy, and another to run a Web company. David S. Wetherell, the chairman of trend-setting Internet incubator CMGI Inc., is about to find out just how different they are now that he is buying Compaq Computer Corp.'s AltaVista search site.

Until now, Wetherell has been known primarily for his knack in selecting promising Internet ventures to invest in. That has made CMGI a popular stock for those who want to do their Web investing by proxy. Compaq endorsed

Wetherell's Web savvy by taking a 16.4% stake in CMGI and becoming its largest outside shareholder.

Still, acquiring AltaVista is the biggest test so far of Wetherell's strategy to make CMGI into a premier Internet operating company. Wetherell says he can do a lot more with AltaVista than did Compaq, which never developed an effective strategy for the service. His plan: to rev up what is now the 15th-largest Web portal with new content and services drawn from CMGI companies, including Raging Bull Inc., a popular financial message board, and



iCast, a wholly owned CMGI subsidiary that's developing Webcasting services.

AltaVista will also be at the heart of CMGI's efforts to sell customized services to companies looking to quickly

CNET GOES FOR BROKE

The cyber portal is plunging into the red to boost its brand

For five quarters running, CNET Inc. has done what few Internet companies have done: shown a profit. But now Chairman and Chief Executive Halsey M. Minor is chucking his conservative, money-making approach. On June 30, Minor announced that he will plunge into the red with a \$100 million ad campaign aimed at making CNET's name as synonymous with technology as ESPN is with sports. Says Minor: "This is a bold play for a dominant position."

In putting growth ahead of profit, Minor hopes to emulate the success of other Web companies such as Amazon.com Inc. The online retailer is one of the top companies in cyberspace and the darling of investors—even though it won't make a dime until 2001 at the earliest.

But CNET is switching strategies just when Wall Street wants Web companies to turn profits. Indeed, CNET shares rose 287% from Jan. 1 to June 30 while other Web stocks fell, in part because of its profitability. In its most recent quarter, CNET earned



MINOR: \$100 million to make CNET famous

\$3.2 million on \$19.6 million of revenue. CNET is also tops in its category—a portal dedicated to technology news and information. In May, more than 400,000 more individual viewers clicked to CNET than to rival ZDNet, says researcher Media Metrix.

Minor says he needs to do better to make it into the Web elite. Just 4% of Internet users knew CNET in a recent brand study, vs. 14% for Amazon and 41% for Yahoo! Inc. The reason was clear: CNET spent less than \$400,000 on marketing in 1998. Now, CNET is betting \$100 million that it can use a slick ad campaign to elevate itself from a nerd's outpost to a popular site for all sorts of consumers. Welcome to the red ink pool.

By Linda Himmelstein
in San Francisco

pany that holds stakes in more than 40 leading Web companies. "We did not sell our Internet assets," says Rosen. "We found it made more sense to have a significant share of a broad portfolio of Internet properties and technologies, rather than 100% of one property."

Most Wall Street analysts applauded the AltaVista deal, figuring that Compaq doesn't need to control the site to profit from its growth. But analysts are growing impatient for signs of a turnaround and a new CEO. "They still need to get their cost structure and their services sorted out," says Daniel Niles of BancBoston Robertson Stephens. The company announced on June 17 that it will post a loss of as much as \$260 million for the June quarter because of higher-than-expected costs and "inadequate revenue growth." Its shares

now trade at about \$22—down from nearly \$50 in January.

Fixing that dismal fiscal picture and rebuilding credibility on Wall Street will be top challenges for whomever Rosen lands as CEO. The easy part of the job will be figuring out who's the boss.

By Steve Hamm in New York and
bureau reports

a year earlier, compared with Dell Computer, whose shipments 53%. "It's a massive state of confusion at Compaq. A lot of accounts moving over," crows Dell CEO Michael S. Dell.

In spite of Compaq's problems, Rosen committed to forging ahead with the plan that Pfeiffer laid out a year ago. Rather than completely adopting a direct-sales strategy, he declared he would serve customers

in stores, or over

phone—

however way

customers prefer.

Rosen's twist is

to make everything

Compaq does happen

faster. Step one

is May 10, when

Compaq consolidated

distribution among

wholesalers to

the amount of inventory

sitting in warehouses.

A month later, it

led operations into

the product groups—

consumer PCs, business

and large computers—

responsible for forging

profitable business. Most

recently came the sale of its

low-profile AltaVista search

site and related businesses.

But why sell off an established Net

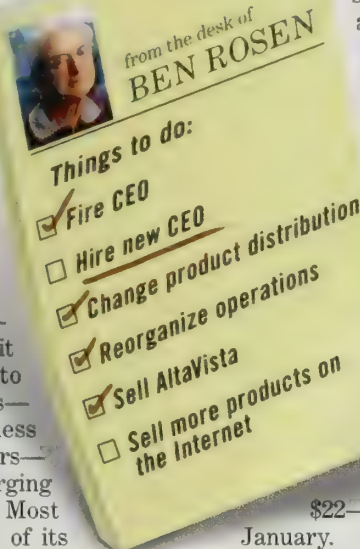
asset? Rosen insists the deal actually

represents an expansion of Compaq's

internet ambitions. In exchange for

AltaVista, it gets a 16% share in CMGI

and a strategic relationship with a com-



WETHERELL: He can now be a hands-on manager

lish a Web presence. CMGI companies can provide Web-hosting, advertising placement, customer profiling, and other services while AltaVista serves as the client's window to the Web. "It's the fastest growing market to come, bigger than all portals today," says Wetherell.

TO THE RESCUE. The AltaVista deal also helps Wetherell dodge a potential bullet. Had he consummated a major acquisition Oct. 31, CMGI risked being classified as a mutual fund by the Securities Exchange Commission. Last

year, CMGI crossed an SEC threshold when more than 40% of its assets were publicly traded securities in companies that CMGI does not control. Since mutual funds aren't allowed to exercise influence over the companies they invest in, the classification would effectively bind Wetherell's hands. He says that was not a motive behind the deal, but concedes that it "is a nice side-benefit."

In the meantime, to refashion CMGI, Wetherell must demonstrate he can really draw large numbers of Webheads to AltaVista. "The question is, can CMGI really turn this collection of companies into a network, and build a lot of traffic?" says Keith E. Benjamin, an analyst with BancBoston Robertson Stephens. That is the peak Wetherell hopes to climb with AltaVista.

By Paul C. Judge in Boston

CHIPS

INTEL IS TAKING NO PRISONERS

It's slashing prices to gain share and blitzkrieg the competition

Last January, Intel Corp. Executive Vice-President Paul S. Otellini declared the chip giant was "deadly serious" about grabbing market share in cheap PCs. Maybe he should have used less ominous words: Intel's aggressive marketing and price cuts have indeed delivered big share gains, but the impact on its rivals has been so severe that some are now struggling to survive. For antitrust enforcers who continue to watch over Intel's practices since it settled a Federal Trade Commission suit last March, the failure of one its competitors would set off bells.

When Otellini began his push, though, it was Intel that was on the run. At the end of 1998, it had 75% of the PC processor market, down from 86% the year before, thanks to gains by rivals Advanced Micro Devices Inc. and National Semiconductor Corp., whose low-cost knockoffs of Intel's Pentium chips were getting a huge chunk of the hot sub-\$1,000 PC business. Although Intel still dominated the chip market and had a lock on the upper—and more profitable—end of the business, that wasn't enough. "Every time Intel's share drops below 80%, a big red light goes off in the CEO's office," says analyst Linley Gwennap of Cahners MicroDesign Resources.

Intel responded by cutting the price of its low-end Celeron chips in half—some now sell for only \$35—and courting PC makers with discounted packages of PC parts. Since February, U.S. retail sales of sub-\$1,000 Celeron PCs have surged 50%, according to PC Data.

Rivals, meanwhile, are reeling. On

May 5, National dropped out of the PC processor business, saying it couldn't make a profit in it. AMD has lost 10 points of market share in cheap PCs. It has warned Wall Street that it may post a \$200 million second-quarter loss; analysts don't expect profits before next year. "Three price reductions by Intel made it hard to compete," concedes AMD CEO W. Jerry Sanders III.

Intel has used the same aggressive pricing to grab share in other businesses. For years, it chased 3Com Corp., the leading supplier of network adapters—circuit cards used for con-

necting PCs to networks. But since February, Intel has turned up the heat. It matched Intel's price cuts, 3Com's revenue from its network-card business shrink by \$40 million in its latest quarter. "Intel is killing them," says Cowen Securities Corp. analyst Christopher Stix. The next nail: Intel hopes to replace network cards with chips, where it has the upper hand.

Intel can be superaggressive on Celerons and network cards because it generates big profits on other products. "Intel isn't making money on Celerons, but it can subsidize scorched-earth pricing with its high-end chips," says Cowen analyst Drew Peck. Nearly all of Intel's expected \$7.7 billion profit this year will come from processors used in computers costing \$1,200 or more.

BARELY LEGAL? What Intel is doing is perfectly legal—as long as it isn't actually selling products below cost. But antitrust experts say Intel could run afoul of regulators if they found that its actions were meant to protect a monopoly through predatory pricing. Intel will comment on that issue, but CEO R. Barrett says his company is meeting "competing vigorously."

Even if Intel were to actually sell chips below cost—as some rivals say it must be doing—proving that is nearly impossible since a big manufacturer can easily shift overhead cost from one product to another. The FTC will comment on Intel, but continues to watch the company's practices.

If for no other reason than to keep the feds at bay, Intel needs AMD, 3Com and other rivals to stick around. 3Com is racing into new markets such as cable modems and home networking. And AMD is pinning its hopes on new high-performance chip called Athlon. But with AMD's earnings dwindling, and 3Com predicting lower sales for the next two quarters, Intel, "may have the squeeze on a little too hard," says Gwennap.

"If AMD collapsed, the market would surely react." May it's time to come back from the dead, seriously.

By Andrew Reinhardt
San Francisco
California

Intel Puts On The Squeeze

ADVANCED MICRO DEVICES No. 2 microprocessor maker says price competition from Intel will lead to \$200 million loss in second quarter. AMD's hopes now lie with a new top-of-the-line chip.

NATIONAL SEMICONDUCTOR

Two years after buying Intel rival Cyrix Corp., National exited the PC processor business on May 5, citing price pressures. Nobody has stepped up to buy the unit so far.

3COM Competition from Intel has made network cards—source of 13% of 3Com's sales—obsolete. 3Com has not generated sufficient growth in other units fast enough to compensate for lost revenues.



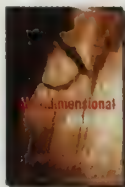
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 STEPHEN
\$3.25 million Sales
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\$3.5 million Sales
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\$3.5 million Sales
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SPORTS BUSINESS

FENWAY VS. THE OTHER GREEN MONSTER



In an age of big-money ballparks, it's an economic anachronism. But should it be replaced or rebuilt?

Fenway Park. In a sport that worships its history, the name brings back rivers of recollections. This is the park where the young Babe Ruth broke into the Bigs, where Ted Williams defined the art of hitting, and whose intimacy provided the inspiration for Camden Yards and other parks that aim to evoke the past. How fitting, then, that on July 13, the last All Star Game of the century will be played in Fenway. But how ironic that even as they prepare the park for this tribute, the Boston Red Sox are launching a campaign to tear Fenway down.

The Red Sox are proposing a \$545 million plan to build a larger Fenway near the current park—the most expensive stadium project in baseball history. And it would set the stage for Red Sox CEO John L. Harrington to sell the team, now owned by a charitable trust established by the late Jean R. Yawkey, widow of Thomas A. Yawkey, who bought the Sox for about \$1 million

in 1933. With a new stadium, “the Red Sox could sell for more than the record \$313 million brought by the Los Angeles Dodgers,” predicts Marc S. Ganis, president of Sportscorp Ltd., which places values on sports businesses.

But first, the Sox must defeat Save Fenway Park!, a group of fans, preservationists, and neighborhood activists lobbying to keep Boston baseball on its hallowed ground. Second, the Sox must figure out how to finance the new field despite strict limits on public funding set by Massachusetts House Speaker Thomas M. Finneran, a staunch foe of stadium subsidies. Finneran dismisses familiar arguments for using tax money to build stadiums as “the ego-driven bunk of billionaire [owners] and their acolytes.”

Even the Save Fenway! folks recognize the limitations of Fenway, which opened in 1912. “It’s outdated and has serious structural problems,” says Boston Mayor Thomas M. Menino. That’s putting it mildly. The place is so flood-prone that players use duckboards to keep their feet dry between the dugout and the clubhouse. And fans rou-

tinely miss an inning or **FENWAY** more just trying to buy a 33,000 hot dog, due to the severely cramped concession cut it stands.

Moreover, its 33,871 seats—the smallest park in the majors—make Fenway an economic anachronism. Although Red Sox compensate by charging the highest ticket prices, Fenway still generates less than six other state-of-the-art parks, such as Jacobs Field in Cleveland. And with six more such parks under construction, failure to rebuild Fenway “will relegate the Red Sox to being a mediocre team for the next generation,” warns Ganis.



FINNERAN: Stingy with public money

PALE IMITATION? The ballpark the Sox see as the solution would recreate the famous Fenway quirks: the Green Monster wall, shallow left field. Meanwhile, with 44,000 seats, nearly 100 luxury suites, 5,000 club seats, and vastly expanded concessions, the new Fenway

way would be on a par with baseball’s most lucrative stadiums.

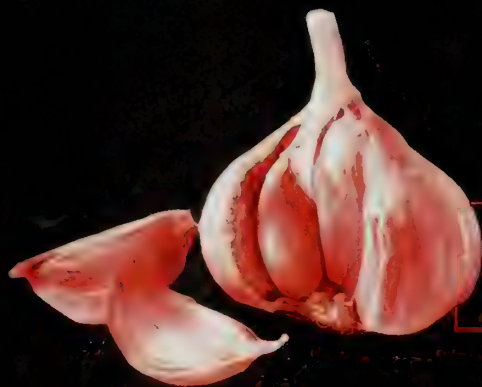
But while the new park “might look like Fenway, it wouldn’t be Fenway,” argues Charles Hagenah, architect



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Save Fenway Park! His elaborate renovation plan would create the same 44,000 seats and extra luxury seating. "The goal is to ensure the Red Sox the same amount of revenue," says Hagenah. To do that, he concedes, much of the park "would be brand new." Still, baseball would be played on the exact same field. "Fans would still see this as Fenway Park," says Hagenah.

But the Red Sox say extensive studies show the idea is impractical. One reason is that they would somehow have to continue to play during four years of construction. With many seats unavailable, huge revenues would be lost. **PATRIOT GAMES.** So far, the Sox are winning the debate, but they still have to figure out how to pay the bill. While the club is skirting the financing issue, Finneran isn't. "We don't oblige taxpayers to build office towers or gas stations or other private facilities," he argues. "It is only in this odd facet of our economy—pro sports—where the owners expect taxpayers will build their buildings for them."

Finneran says he'll apply the "same principles" to the Red Sox that he did to the New England Patriots. Last year, with Finneran clutching Massachusetts' purse strings, the Pats cut a \$375 million deal to move to Hartford. The deal fell through, and now the Pats are back—but they're getting just \$70 million from Massachusetts for infrastructure improvements near their Foxboro stadium.

The most the Sox can hope for is public help with \$200 million in costs beyond the park, including land acquisition and infrastructure. But the Sox will have to finance the \$350 million stadium themselves, which is "more than any team has ever funded," says Ganis. He figures \$100 million could be raised through the presale of luxury seats and concessions. But that would still require borrowing \$250 million. At today's rates, that would mean an annual payment of around \$25 million, says Ganis. If the new stadium generates some \$35 million a year in additional revenues for the Sox, the team would clear just \$8 million to \$10 million a year. "That's far less than Baltimore, Cleveland, or Colorado" has gotten from their new parks, says Ganis, "but it may be the best the Red Sox can hope for in Massachusetts."

Rather than a celebration, then, perhaps the All Star Game should be seen as the beginning of the funeral for Fenway. The park's heritage may be priceless. But in today's game, a new stadium is worth a lot more than even the most nostalgic shrine.

By William C. Symonds in Boston

BRITAIN

PEARSON'S WILY DEALMAKER

Eyeing the Web, Scardino may have more in store

With the sale of Pearson PLC's 13.2% stake in the Lazard group on June 24, Marjorie Scardino capped off a deal-making spree that has dramatically reshaped the British media company in the 2½ years since she became CEO. Extricating Pearson from its tangled relationship with Lazard has long been a priority for Scardino, and she managed to make it a profitable maneuver, too. One Lazard banker conceded that the approximately \$650 million price was more than Michel David-Weill, Lazard's head, had hoped to pay; David-Weill has characterized it as fair.

Since taking charge in January, 1997, of the publishing giant that owns the *Financial Times* and Penguin Publishing, Scardino has sold \$3.2 billion worth of non-core assets and spent more than \$5 billion buying media and publishing properties. And the 52-year-old American-born exec doesn't seem to be done yet. In a phone conversation from California, where she is visiting digital-publishing subsidiaries, she said it would be a "big mistake" to stop fine-tuning Pearson's portfolio.

Her next big objective: push Pearson onto the Web. "When you are out here in California, you realize how much is going on," she says. "You have to make bets on what will be enduring and what is complete B.S."

Meanwhile, Scardino is spending heavily to boost the *Financial Times'* circulation beyond the current 80,000 in the U.S. The *FT* already owns leading business papers in Spain, Portugal, and France, and newspaper ventures in Germany and Russia. Its non-British

circulation rose 37% last year to 210,000.

Scardino is high on Spanish-language media. So she is strengthening ties with Telefónica, the former Spanish telco monopoly that wants to dominate multimedia in the Hispanic world. Pearson has just agreed to supply game shows and dramas from its television-production division to Telefónica's TV station in Spain and Latin America.

When Scardino took over, Pearson stock was in the doldrums, and analysts and potential raiders were calculating the company's breakup value. Not anymore. By doing much of the breaking up herself, Scardino has successfully managed to keep Pearson together. Before Lazard, her biggest sale had been Tussocks Group, the wax museum and amusement company, for \$563 million in 1998.

Along with rare asset sales, Scardino has been busy. Her biggest splash was last year's \$4.6 billion acquisition of the education assets of Simon & Schuster from McGraw-Hill Inc. has cemented Pearson's position as a major textbook publisher. She has also staked out a clear position in television by buying All American Communications, the producer of *Baywatch* and game shows such as *Price Is Right*.

In other moves, she has installed new management at Pearson, including several Americans in key slots. Earnings rose 19% in 1998, to \$622 million, on sales of \$3.8 billion, helping boost the stock price by 6% in just under 2½ years. Ad revenue and stronger textbook sales have been key sources of growth. "She has made it look easy," says Louise Barton, a media analyst at London broker Investec Henderson Crosthwaite. "She convinces just about everyone she talks to."

It is too soon to tell how all of Scardino's bets will fare: Global, multilingual media is a tricky business. But give Scardino credit: She's transformed Pearson from a target to a player.

By Stanley Rea in London



CEO SCARDINO

Results aren't in yet on many of her moves, but the stock price has jumped 65%

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COMMENTARY

By Mike France

CLASS ACTIONS: FINE-TUNE THE LAW, DON'T TRASH IT

After a decade of controversy, science has rendered its verdict on the dangers of breast implants: June 21, the Institute of Medicine of the National Academy of Sciences declared that silicone implants n't cause serious disease. That means the \$7 billion that Dow Chemical Corp., 3M, and others settled out in settlement ransom is apparently for nothing. Would-be tort reformers have embraced the IOM report as an indictment of plaintiffs' lawyers everywhere. Just as the implant cases were bogus, they argue, are most of the other suits brought by contingency-fee attorneys. Now, they're renewing calls for major changes in the American legal system, such as the adoption of rules forcing users of lawsuits to pay winners' expenses.

NEEDED TOOL. No question, the breast-implant debacle raises serious questions about the U.S. justice system. And nobody argues that lawyers would be able to use questionable science to launch a class action on behalf of thousands of plaintiffs just to threaten companies with the possibility of multibillion-dollar verdicts. But the way to fix this problem is by fine-tuning the rules for mass litigation, not by reinforcing tort law.

Harsh reforms like "loser pays" would render impossible much of the good work plaintiffs' attorneys do. Remember: Tort suits have led manufacturers to recall dangerous or defective birth-control devices, car parts, and children's pajamas. They also play a role in spurring companies to make better products. And by going after companies that mislead investors, plaintiffs' lawyers act as an important adjunct to the understaffed Se-

curities & Exchange Commission.

A 1998 seminar sponsored by the Defense Research Institute on how to create a "litigation-resistant product" was a graphic illustration of the power of the plaintiffs' bar. Speaker James J. Seifert, an in-house counsel at lawn mower manufacturer Toro Co., warned listeners that if rivals instituted a safety improvement, they needed to convince a jury that they had followed suit within one year. "It pays to be a safety leader," Seifert said. Other speakers dis-

KEEPING COMPANIES ON THEIR TOES

DALKON SHIELD After a series of punitive-damage awards, A.H. Robins recalled the harmful birth-control device.

KIDS' PRODUCTS Dangerous cribs and flammable pajamas have been taken off the market largely because of tort suits.

TYLENOL After a big personal-injury verdict, the FDA required warnings about the dangers of consuming Tylenol with alcohol.

AUTOMOBILES Windshields, gas tanks, and other car components have been redesigned largely because of product-liability suits.

FINANCE Securities suits against Prudential Insurance, Waste Management, and others have raised standards for corporate behavior.

cussed how manufacturers can do a "human factors" analysis of the unforeseeable ways people may misuse a new product and the latest research on what language to use in warning labels.

If only a fraction of the lawyers at the New Orleans seminar get their companies to heed this advice, the long-term savings in injuries, and perhaps even lives, will be enormous.

While no definitive studies have been done, it's easy to

see that a marginal increase in the safety of all consumer products could dwarf the money wasted on implant cases.

As for securities-fraud suits, the huge settlements extracted from Waste Management Inc., Prudential Insurance Co., and others play a key role in deterring companies from questionable practices. With the number of people investing directly in stocks increasing—and the staff of the Securities & Exchange Commission decreasing—the plaintiffs' bar "has a very important place in the scheme of things," says University of Texas Law School securities expert Henry Hu. "One of the reasons the U.S. market is so much cleaner than anybody else's is because of these private actions."

Certainly, tort lawyers are hardly the selfless advocates of helpless victims they often pretend to be. Many are motivated mostly by money. But their pursuit of economic self-interest may not be an entirely bad thing—any more than it is for execs.

NEW RULINGS. The breast-implant mess happened for two reasons: It's too easy to take advantage of junk science and too easy to certify huge class actions. Slowly but surely, these issues are being addressed. In March, the Supreme Court gave

judges new power to block questionable scientific testimony in *Kumho Tire Co. vs. Carmichael*. And in June, it capped a series of federal decisions clamping down on class-action abuses with *Ortiz vs. Fibreboard Corp.*, which makes it harder to win approval for class-action settlements. These rulings might have halted the breast-implant suits in the first place. Let's give them a chance to work before we perform radical surgery on the tort system.

France is BUSINESS WEEK's legal affairs editor.



DALKON SHIELD

EDITED BY MARK FRANKEL & KELLEY HOLLAND

SBC-AMERITECH GETS A BOOST

SBC COMMUNICATIONS AND Ameritech have moved closer to the altar. On June 29, the two Baby Bells agreed to unprecedented conditions to win Federal Communications Commission approval for their \$62 billion merger.

To allay regulators' worries that the merger of the two telecom giants would stifle rather than promote local phone competition, the companies agreed to speed up plans to compete in 30 markets outside their home regions within 30 months. If they fail to do so, they face penalties of up to \$40 million per market. The companies also agreed to make their home markets more open to

competition by committing to lease capacity on their networks at deep discounts. With these conditions in place, the FCC is likely to approve the huge telecom deal this fall.

WANT TO BANK AT WAL-MART?

ARE BANKS ABOUT TO GET Wal-Marted? In yet another effort to expand its reach among consumers, Wal-Mart Stores, the world's largest retailer, is tip-toeing into financial services. Known for dominating just about any market it enters, Wal-Mart wants to buy Federal BankCentre, a one-office thrift with \$26 million in assets located outside Tulsa. Although Wal-Mart already leases space to about 450 banks in 600 supercenters, the company wants the flexibility to offer financial services under its own name in the future, either in stores or online. Wal-Mart expects to open five branches next year in undetermined locations.

A BROKEN DREAM FOR DREAMWORKS

ENDING A FOUR-YEAR DRAMA, DreamWorks appears ready to abandon plans to build Hollywood's first new studio in 60 years. The film company has been unable to get financing for the \$250 million studio complex it wanted to build on 47 acres in Playa Vista, Calif. Los Angeles billionaire Gary Winnick and AFL-CIO pension-backed Union Labor Life Insurance had intended to lend Dreamworks \$200 million. But negotiations bogged down over lending covenants. Dreamworks, which is likely to formally pull out in the next month, is already planning to expand its current Glendale, Calif., animation studio to accommodate its administrative staff.

HEADLINER: FRANK NEWMAN

NO MIRACLE MAN

In 1996, Frank Newman took over Bankers Trust—and a difficult turnaround. He had to restore BT's reputation after a derivatives scandal, reduce its risk profile, and try to produce the high returns that marked the bank in its go-go days.

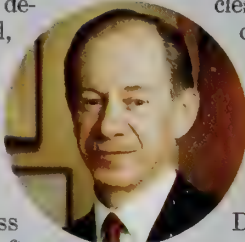
On June 30, less than a month after completing the sale of BT to Deutsche Bank, Newman stepped down—much of his mission still unaccomplished.

Newman did boost BT's investment banking, buying Alex. Brown. But BT's exposure in emerging markets led to a \$488 million loss in last year's third quarter, after which BT agreed to sell

out to Deutsche for \$9 billion. "Newman came into a situation where he would have had to work miracles," says banking consultant Bert Ely. "Inevitably, BT would have been acquired by somebody."

Newman's position at Deutsche weakened after BT admitted using unclaimed funds to fatten profits. The transfers predated Newman, but Deutsche seemed troubled by BT's guilty plea. Don't cry for Newman, 57. The former Deputy Treasury Secretary leaves with a pay package of at least \$69 million.

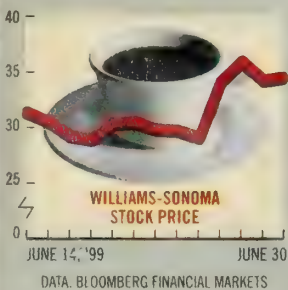
By Gary Silverman



CLOSING BELL

COFFEE CLUTCH?

What's cooking at Williams-Sonoma? On June 25, shares of the emporium, known for big blenders and pricey pots and pans, jumped 17%, to \$34, after investors heard buyout rumors. The reported suitor: Starbucks, which analysts said might want to blend Williams-Sonoma's E-commerce with its own. Williams-Sonoma says it isn't for sale. Starbucks declined comment. But William Blair's David Ricci says the rumor may prompt a bid: "It wouldn't surprise me if other companies now make a pass."



THE SEC STANDS THE NYSE IN THE CORNER

THE NEW YORK STOCK EXCHANGE got its knuckles rapped for the first time ever by the Securities & Exchange Commission on June 29. The SEC found that the Big Board failed to enforce securities regulations on a group of floor brokers who were charged in 1998 with illegal trading which netted \$11 million in illicit profits; several later pled guilty to the charges. The SEC ordered the NYSE to beef up its surveillance and compliance measures on brokers.

ONE LESS THING TO FEAR FROM Y2K

BUSINESS—ESPECIALLY HIGHTech companies—scored a legislative victory June 29 when the White House and Republican congressional leaders struck a compromise deal for

legislation to limit laws arising from the Y2K computer bug. The bill, which opposed by consumer groups and trial lawyers, gives companies 90 days to fix problems before they can be sued. The Clinton Administration agreed to concessions that cap punitive damages for companies employing fewer than 50 workers, require most class actions to be tried in federal courts, and limit companies' liability to their share of any Y2K damage.

ET CETERA...

- IBM is in talks to buy Sequent Computer Systems to bolster its server business.
- The SEC is looking into Microsoft's accounting financial reserves.
- Breset by a copper glut, Phelps Dodge will cut 1,600 jobs and trim production.
- Justice has begun an antitrust probe into the undersea cable business.

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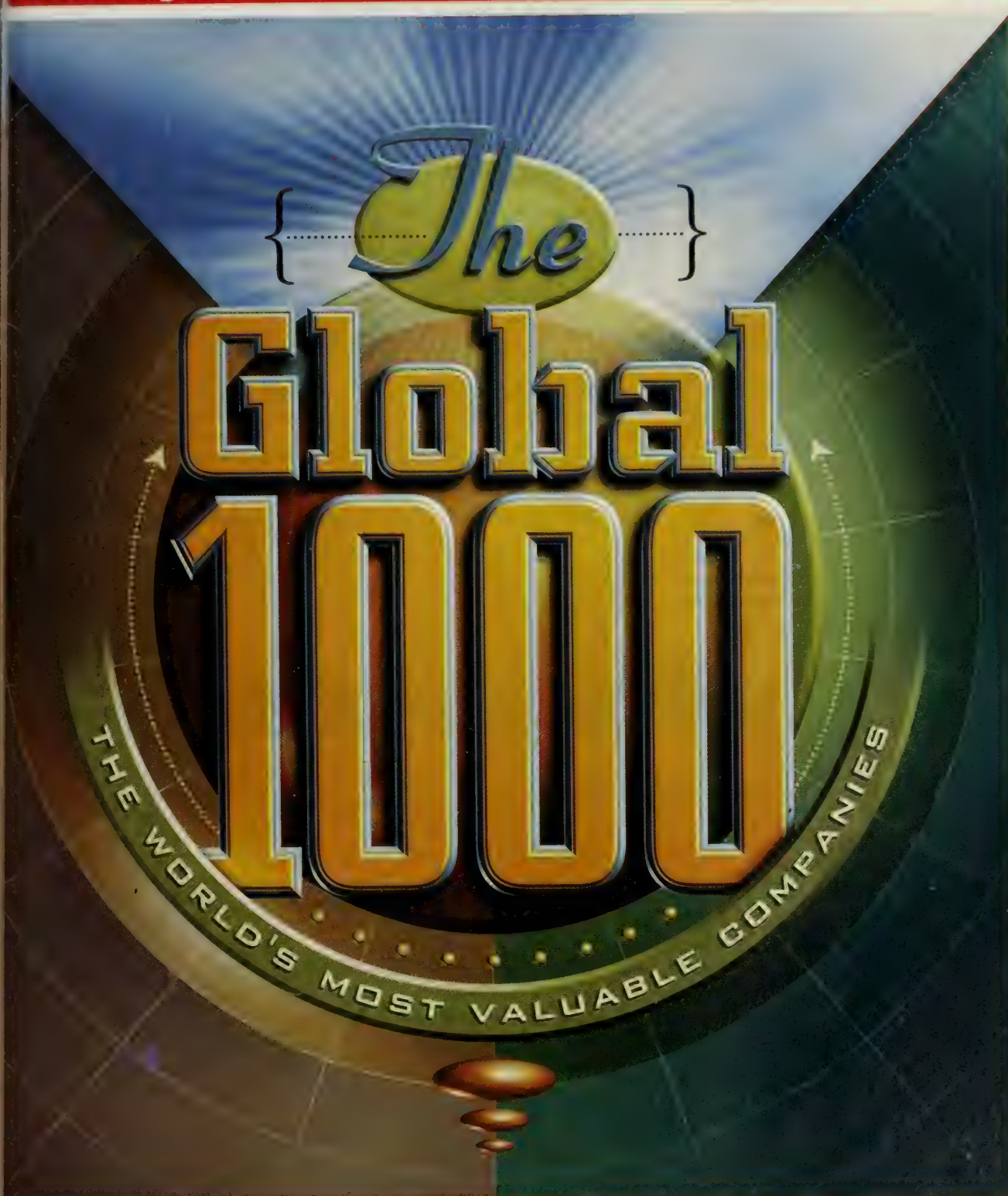
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The **Global 1000**

THE WORLD'S MOST VALUABLE COMPANIES

CONTENTS

50

INTRODUCTION

The Net reshuffles
the rankings

52

**RANKINGS BY
COUNTRY**

80

**ALPHABETICAL
INDEX**

84

EMERGING MARKETS

Investors regain their
enthusiasm

85

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CONTENTS

50

INTRODUCTION

The Net reshuffles
the rankings

52

RANKINGS BY COUNTRY

80

ALPHABETICAL INDEX

84

EMERGING MARKETS

Investors regain their
enthusiasm

85

EMERGING-MARKET TABLES

CALL IT THE NET EFFECT

The biggest influence on this year's ranking? The Internet

How much has the Net changed things? Only a decade ago, Japanese banks, a Swiss confectioner, and even a Philadelphia utility company were vastly more popular with investors than Microsoft Corp. With a market value of just \$3.3 billion, William H. Gates III was running a middle-of-the-pack outfit that ranked just 539th on BUSINESS WEEK's Global 1000 list by market capitalization in 1989. Microsoft figured lower in investors' minds than retailer F.W. Woolworth.

Today, after riding the personal-computer wave right on into the Internet boom, Microsoft has vaulted to No. 1 in our annual rankings. Only three years after breaking into the Top 10, Gates's software giant has raced at fiber-optic speed ahead of such stalwarts as GE, IBM, and Exxon. At \$407.22 billion, its market value is simply "eye-popping," says Hambrecht & Quist analyst Christopher J. Galvin.

Microsoft's 95% surge in value over 12 months demonstrates how enamored investors are of the emerging digital economy. Just as the Internet and other aspects of the digital world—computers, cell phones, digital broadcasting, consumer electronics—have recast the way business is done and the way people live, so they have sharply influenced the makeup of this year's list.

Whether they are U.S. upstarts such as Amazon.com (No. 254) or eBay

(No. 220) or offshore communications powerhouses like British Telecommunications (No. 26) and Japan's NTT Mobile Communications Network (No. 27), companies whose fortunes are linked to the digital world—and especially the Net—have almost instantly become market stars. "As the Internet takes hold, it's creating a paradigm shift," says America Online Inc. Chief Executive Stephen M. Case, whose company has soared from No. 229 on the BW list last year to No. 20. The long-promised convergence of

telecommunications and computers adds, is "happening on Internet time."

True enough: The tech revolution continues. The big question is how long investor enthusiasm for all things digital will continue to power the huge gains in market value evident on this year's list. Already, U.S. stocks directly linked to the Net craze have lost 40% or more of their value since April. So there's no guarantee the big winners of this year's Global 1000 will dominate next year's list. Any examination of the Global

since 1989 shows that investors have shifted their money from country to country and from sector to sector based on a changing of corporate performance and often unjustified expectations. "Stock markets are just simply not rational," says Hugh Johnson, chief investment officer at the First Albany Co. brokerage firm.

Still, companies that consistently perform well in the Global 1000 over time are those worth watching. For now, Americans are leading the way. Using data compiled by Geneva-based Morgan Stanley Capital International Inc., the Global 1000 ranks companies in 100 countries by market capitalization as of May 31. Investors have lifted the fortunes of such U.S. Net-related outfits as lead Microsoft, Intel (No. 8, from No. 10 last year), a telecom manufacturer Cisco Systems (No. 9, from No. 30), they've mented U.S. corporate leadership. American co-

How the Giants Stack Up

SALES

(BILLIONS OF U.S. DOLLARS)

1	GENERAL MOTORS	\$158.51
2	DAIMLERCHRYSLER	154.62
3	FORD MOTOR	144.42
4	WAL-MART STORES	137.63
5	MITSUBISHI CORP.	129.94
6	EXXON	115.42
7	mitsui & co.	114.78
8	TOYOTA MOTOR	104.68
9	GENERAL ELECTRIC	100.47
10	ROYAL DUTCH/SHELL GROUP	93.69

PROFITS

(BILLIONS OF U.S. DOLLARS)

1	GENERAL ELECTRIC	\$9.30
2	EXXON	6.37
3	IBM	6.33
4	INTEL	6.07
5	FORD MOTOR	5.94
6	CITIGROUP	5.81
7	DAIMLERCHRYSLER	5.81
8	BANK OF AMERICA	5.61
9	PHILIP MORRIS	5.37
10	MERCK	5.25

SHARE-PRICE GAIN

(PERCENTAGE CHANGE FROM 1998 IN U.S. DOLLARS)

1	AMERITRADE HOLDING	1142%
2	CMGI	834
3	E*TRADE GROUP	723
4	AMAZON.COM	708
5	METROMEDIA FIBER NETWORK	690
6	REALNETWORKS	513
7	AMERICA ONLINE	473
8	YAHOO!	441
9	CHARLES SCHWAB	377
10	ECHOSTAR COMMUNICATIONS	351

RETURN ON EQUITY

(PERCENTAGE)

1	BRITISH AMERICAN TOBACCO	497.4%
2	UNISYS	344.7
3	GENERAL MILLS	270.0
4	QUAKER OATS	262.9
5	VODAFONE GROUP	198.8
6	RENTOKIL INITIAL	185.2
7	IMPERIAL CHEMICAL INDUS.	148.2
8	AVON PRODUCTS	145.5
9	REUTERS GROUP	130.6
10	ADIDAS-SALOMON	126.6

DATA: MORGAN STANLEY CAPITAL INTERNATIONAL INC., BUSINESS WEEK

s have seen their stock prices rise 39%, and they now account for 57% of the world's publicly invested capital. But be sure, other factors besides digital technology influence the list. Current events play a role, since the Global 1000's market value in dollar terms. The list for this year also reflects Europe's continuing market slump. Germany's market, for instance, has fallen victim to government disarray, a lackluster economy, and a sharp decline of the much-ballyhooed Deutsche Mark. Together, Continental and British companies total just 314 this year, down from 321 in 1998. By contrast, the long-suffering Japanese companies have made modest gains. As a group, Japanese companies gained 35% in market value in dollar terms last year and took 135 spots on the list, up from 116. Leader Nippon Telegraph & Telephone Corp. gained 20% in market value, even though it dropped its market notches to No. 13.

ISH STAR. This year, the advance of the Internet cuts across these national boundaries. Of the top 50 companies on the list, 19 are either directly driven by the fortunes of the medium (as with America Online) or indirectly benefited (as with 26th-ranked British Telecommunications PLC, up from No. 40). BT, for instance, is building a network that connects the world's 100 biggest cities. "There is no doubt that the Internet is driving a lot of our growth," says Alfred R. McKet, chief executive of the company's Worldwide division. Investors have begun to bid up stocks that could be Net winners even as they've walked away from other players in the markets. Finland's companies as a group managed just a 1% share price gain overall, while Net-friendly cell-phone maker Nokia more than doubled its valuation and climbed to No. 87 to No. 38.

For the digital economy's leaders, maintaining high growth will certainly be tougher with each peak climbed. Not that revenue growth at Microsoft slowed from 46% in 1996 to just 26% this year, for instance, Chief Operating Officer Robert J. Herbold says "it is unlikely Microsoft [can] deliver the growth rates that we have in the past." Perhaps. But other Internet companies are just beginning their climb upward. And the drive to be the next Microsoft will be like for an exciting race.

By Joseph Weber in Toronto, with Catherine Yang in Washington, Mike Heller in San Mateo, Kerry Capell in London, and bureau reports

The Top 100 Companies

This year saw strong gains by U.S. high-tech outfits, with Microsoft the new No. 1, Intel going from No. 10 to No. 8, and IBM and Cisco Systems hitting the Top 10

RANK		MARKET VALUE	RANK	MARKET VALUE
1999	1998		1999	
		Billions of U.S. dollars		Billions of U.S. dollars
1	2	MICROSOFT	U.S.	407.22
2	1	GENERAL ELECTRIC	U.S.	333.05
3	13	IBM	U.S.	214.81
4	5	EXXON	U.S.	193.92
5	3	ROYAL DUTCH/SHELL	Neth./Britain	191.32
6	9	WAL-MART STORES	U.S.	189.55
7	16	AT&T	U.S.	186.14
8	10	INTEL	U.S.	180.24
9	30	CISCO SYSTEMS	U.S.	174.09
10	26	BP AMOCO	Britain	173.87
11	4	COCA-COLA	U.S.	168.99
12	6	MERCK	U.S.	159.80
13	8	NTT	Japan	156.77
14	71	MCI WORLDKOM	U.S.	152.24
15	36	CITIGROUP	U.S.	150.94
16	19	LUCENT TECHNOLOGIES	U.S.	150.34
17	25	AIG	U.S.	141.62
18	7	PFIZER	U.S.	138.37
19	14	BRISTOL-MYERS SQUIBB	U.S.	136.53
20	229	AMERICA ONLINE	U.S.	129.07
21	20	JOHNSON & JOHNSON	U.S.	124.64
22	12	PROCTER & GAMBLE	U.S.	124.05
23	32	DEUTSCHE TELEKOM	Germany	115.02
24	33	BANK OF AMERICA	U.S.	112.87
25	22	BERKSHIRE HATHAWAY	U.S.	109.37
26	40	BRITISH TELECOMMUNICATIONS	Britain	107.14
27	NR	NTT DOCOMO	Japan	106.14
28	15	ROCHE HOLDING	Switzerland	103.72
29	11	NOVARTIS	Switzerland	101.63
30	17	GLAXO WELLCOME	Britain	101.53
31	34	SBC COMMUNICATIONS	U.S.	100.32
32	18	TOYOTA MOTOR	Japan	99.83
33	42	HEWLETT-PACKARD	U.S.	95.73
34	39	HSBC HOLDINGS	Britain	93.69
35	21	PHILIP MORRIS	U.S.	93.55
36	44	BELLSOUTH	U.S.	89.38
37	63	DELL COMPUTER	U.S.	87.34
38	87	NOKIA	Finland	87.20
39	66	DAIMLERCHRYSLER	Germany	86.87
40	35	BELL ATLANTIC	U.S.	84.99
41	54	HOME DEPOT	U.S.	83.64
42	76	TIME WARNER	U.S.	81.19
43	59	FRANCE TELECOM	France	79.93
44	49	MOBIL	U.S.	79.29
45	37	ELI LILLY	U.S.	78.67
46	45	AMERICAN HOME PRODUCTS	U.S.	75.95
47	23	DUPONT	U.S.	73.74
48	50	SMITHKLINE BEECHAM	Britain	72.92
49	73	AMERITECH	U.S.	72.33
50	28	LLOYDS TSB GROUP	Britain	71.95
51	27	NESTLE	Switzerland	71.58
52	117	TYCO INTERNATIONAL	U.S.	71.33
53	90	ASTRAZENECA	Britain	70.89
54	47	FANNIE MAE	U.S.	69.57
55	46	FORD MOTOR	U.S.	69.17
56	55	ABBOTT LABORATORIES	U.S.	68.70
57	98	BANK ONE	U.S.	66.80
58	67	TELECOM ITALIA	Italy	66.45
59	48	SCHERING-PLOUGH	U.S.	66.35
60	124	WELLS FARGO	U.S.	66.11
61	29	ALLIANZ	Germany	66.06
62	128	TELSTRA	Australia	63.89
63	24	UNILEVER	Neth./Britain	63.77
64	81	UBS	Switzerland	63.41
65	68	BANK OF TOKYO-MITSUBISHI	Japan	61.80
66	58	GTE	U.S.	61.11
67	53	CHASE MANHATTAN	U.S.	61.10
68	65	CHEVRON	U.S.	60.46
69	31	WALT DISNEY	U.S.	59.72
70	108	VODAFONE GROUP	Britain	58.97
71	143	AIRTOUCH COMMUNICATIONS	U.S.	57.80
72	41	GILLETTE	U.S.	56.47
73	72	MORGAN STANLEY DEAN WITTER	U.S.	55.06
74	70	AMERICAN EXPRESS	U.S.	54.52
75	92	MANNESMANN	Germany	53.67
76	64	WARNER-LAMBERT	U.S.	52.75
77	60	L.M. ERICSSON	Sweden	52.57
78	51	PEPSICO	U.S.	52.39
79	79	MCDONALD'S	U.S.	52.28
80	78	TELEFONICA	Spain	51.15
81	43	ING GROEP	Netherlands	50.76
82	198	EMC	U.S.	50.64
83	57	ENI	Italy	50.48
84	106	NORTEL NETWORKS	Canada	49.85
85	118	MOTOROLA	U.S.	49.85
86	NR	ZURICH FINANCIAL SVCS.	Britain/Switz.	49.05
87	121	SPRINT FON GROUP	U.S.	48.49
88	52	CREDIT SUISSE GROUP	Switzerland	48.11
89	74	AEGON	Netherlands	47.87
90	175	MEDIAONE GROUP	U.S.	46.21
91	273	SUN MICROSYSTEMS	U.S.	46.08
92	83	BARCLAYS BANK	Britain	45.83
93	69	GENERAL MOTORS	U.S.	44.82
94	62	FIRST UNION	U.S.	44.70
95	80	TIM	Italy	43.84
96	205	TEXAS INSTRUMENTS	U.S.	42.87
97	489	CHARLES SCHWAB	U.S.	42.87
98	149	MEDTRONIC	U.S.	41.57
99	94	AXA	France	41.36
100	110	L'OREAL	France	41.24

BusinessWeek ONLINE

For more on the Global 1000, including additional tables and Q&As with AOL's Steve Case and others, see the July 12 issue at www.businessweek.com

Country by Country

GLOSSARY

MARKET VALUE: Share price on May 31, 1999, multiplied by latest available number of shares outstanding, translated into U.S. dollars at May month-end exchange rates. Market value may include several classes of stock; price and yield data are based on the company's most widely held issue.

SHARE PRICE AND ANNUAL

CHANGE: Closing per-share

price on May 31, 1999, in U.S. dollars. Annual percent change from May 29, 1998, to May 31, 1999, both in U.S. dollars and in each company's local currency.

PRICE/BOOK VALUE RATIO: The ratio of May closing price to latest available net worth per share or common shareholders' equity investment.

PRICE/EARNINGS RATIO: The ratio of May 31 closing price to

latest 12-months' earnings per share.

YIELD: Latest 12-months' dividends per share as a percent of May closing price.

SALES: Net sales reported by company, translated at May 31 exchange rates; revenues for banks and other financial institutions are not included because they are not comparable to those of industrial companies.

PROFITS: Latest aftertax earn-

ings available to common shareholders, translated at 31 currency exchange rates. Profits are from companies' continuing operations before extraordinary or special item sales, profits, and assets at 1998 fiscal year unless noted.

RETURN ON EQUITY: Latest months' earnings per share percent of most recent book value per share.

INDUSTRY CODE: For key to two-digit code, see page 78

Data for individual companies: Morgan Stanley Capital International Inc., unless otherwise indicated. For further information on MSCI data, contact Morgan Stanley Dean Witter at 762-5790 (New York) or 0171-425-6660 (London). Country composites and rankings calculated by BUSINESS WEEK. Additional data by Standard & Poor's Compustat, a division of The McGraw-Hill Companies if footnoted.

COUNTRY RANK	GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	INDUSTRY CODE	
GLOBAL COMPOSITE		19699334	176	6	9	4.8	26	2.1	9634530	602377	39425356	19.1	
AUSTRALIA													
COUNTRY COMPOSITE		233581	9	20	16	3.1	29	2.6	73321	11051	633840	13.4	
1	TELSTRA	62	63890	5	63	58	8.9	31	1.8	10911	1949	17172	29.0
2	NEWS CORP.	144	29602	8	32	28	1.7	31	0.2	12293	1168	35347	5.7
3	NATIONAL AUSTRALIA BANK	190	24287	17	19	15	2.3	13	4.2	NA	1629	163299	18.4
4	BROKEN HILL PROPRIETARY	283	17396	10	17	13	2.8	33	3.2	13746	845	24057	8.4
5	COMMONWEALTH BANK OF AUSTRALIA	317	15253	16	39	34	3.5	20	4.3	NA	707	84690	17.7
6	WESTPAC BANKING	355	12970	7	5	1	2.4	15	4.2	NA	871	89086	16.0
7	AMP LTD.	395	11674	11	NA	NA	2.1	18	1.1	NA	666	73235	11.8
8	AUSTRALIA & NEW ZEALAND BANKING GROUP	408	11415	7	3	0	2.3	14	4.8	NA	762	97131	16.3
9	CABLE & WIRELESS OPTUS	629	7272	2	NA	NA	2.4	101	0.0	1903	-26	4207	2.4
10	LEND LEASE	699	6382	13	19	15	3.0	25	2.9	1816	236	4206	12.0
11	COLES MYER	722	6054	5	17	13	3.5	22	3.0	13356	244	4653	16.0
12	BRAMBLES INDUSTRIES	736	5939	26	30	26	5.5	30	1.9	2604	184	2566	18.5
13	FOSTER'S BREWING GROUP	844	4984	3	31	26	3.0	26	2.6	1984	179	2867	11.6
14	WOODSIDE PETROLEUM	962	4217	6	10	6	4.2	22	2.4	614	195	2857	19.6
15	COCA-COLA AMATIL	968	4173	4	-7	-10	1.5	32	2.4	2812	131	5504	4.9
16	WMC	983	4077	4	14	10	1.4	38	1.8	1757d	172d	5870	3.6
17	RIO TINTO LTD. (6)	NR	3996	14	15	11	2.7	17	3.9	9524	1140	17093	15.9
AUSTRIA													
COUNTRY COMPOSITE		9796	91	-16	-12	3.2	6	1.0	1558	-66	125579	7.1	
1	BANK AUSTRIA	751	5751	51	-44	-41	1.5	20	2.1	NA	389a	118869a	7.1c
2	VERBUND OESTERREICHISCHE ELEKT.	990	4045	131	12	17	4.9	-9	0.0	1558	-455	6710	NEG
BELGIUM													
COUNTRY COMPOSITE		130015	147	-1	4	3.6	26	2.4	59005	7025	788668	14.8	
1	FORTIS (B) (4)	NR	22689	32	0	5	3.3	20	2.7	NA	1652	353460	16.3
2	KBC BANCASSURANCE HOLDING	276	17958	60	-14	-9	3.3	22	1.9	NA	830	154055	15.2
3	ELECTRABEL	293	16923	311	24	31	2.9	20	4.2	6188	865	12732a	14.9c
4	PETROFINA	364	12710	542	32	39	3.1	26	2.2	17781	491	10048	11.8
5	ALMANIJ	373	12511	64	-22	-18	2.4	13	1.6	NA	934	3792a	18.1c
6	TRACTEBEL	428	10988	129	-2	3	3.0	23	2.3	11547	473	20239a	12.9c
7	GROUPE UCB	697	6407	44	-8	-3	8.0	39	0.9	1716	165	1490a	20.6c
8	CREDIT COMMUNAL HOLDING/DEXIA BELGIUM (9)	NR	5922	155	3	9	-2.3	18	2.4	NA	647	207881	12.7

*Based on nonconsolidated results. a) Based on 1997 data. b) Based on 1999 data. c) Difference between earnings and book value between 12 and 18 months. d) Results are for 18 months. e) Results are for 9 months. f) Results are for 5 months. †Company was acquired after May 31, 1999. 1) Global ranking calculated for Royal Dutch/Shell Group by combining market value of the Netherlands' Royal Dutch Petroleum and Britain's Shell Transport & Trading. 2) Global ranking calculated for Unilever by combining market value of the Netherlands' Unilever NV and Britain's Unilever PLC. 3) Global ranking calculated for Zurich Financial Services Group by combining market value of Switzerland's Zurich Allied and Britain's Allied Zurich. 4) Global ranking calculated for Fortis by combining market value of Belgium's Fortis (B) and the Netherlands' Fortis (NL). 5) Global ranking calculated for ABB Asea Brown Boveri by combining market value of Sweden's ABB AB and Switzerland's ABB AG. 6) Global ranking calculated for Rio Tinto by combining market value of Britain's Rio Tinto PLC and Australia's Rio Tinto Ltd. 7) Global ranking calculated for Reed Elsevier by combining market value of Britain's Reed International and the Netherlands' Elsevier. 8) Global ranking calculated for MeritaNordbanken by combining market value of Sweden's Nordbanken and Finland's Merita. 9) Global ranking calculated for Dexia by combining market value of Belgium's Dexia Credit Communal/Dexia Belgium and France's Dexia France. 10) Data for this company provided by Standard & Poor's Compustat, a division of The McGraw-Hill Companies. NA=Not available. NEG=Negative return. NM=Not meaningful

RANK	GLOBAL RANK	MARKET VALUE U.S. \$ MIL.	PROF. PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE BOOK RATIO	P/E RATIO	YIELD %	SALES 1999 \$ MIL.	PROFITS 1999 \$ MIL.	ASSETS 1999 \$ MIL.	PERF. RANK		
											1999	1998	
SOLVAY	790	5493	65	-11	-6	1.8	14	3.2	7771	393	8134a	127c	22
SOCIETE EUROPEENNE DES SATELLITES	820	5282	142	NA	NA	9.3	29	1.7	535	184	1659	32.4	51
DELHAIZE-LE LION	927	4454	86	25	31	5.1	29	1.4	13466	154	4680a	17.6c	54
ELECTRAFINA	933	4411	111	-19	15	1.3	48	3.4	NA	111	4794a	2.7c	11
GROUPE BRUXELLES LAMBERT	957	4268	175	-21	16	1.4	37	3.2	NA	127	5706a	3.7c	71

ITAIN

ENTRY COMPOSITE		1964924	12	4	6	2.8	21	2.6	885014	81038	4132773	33.8	
BP AMOCO	10	173870	18	22	24	4.2	50	2.2	68304	3998	84500	8.3	11
BRITISH TELECOMMUNICATIONS	26	107142	17	60	63	6.2	30	2.0	27180b	3585b	37332	20.6c	55
GLAXO WELLCOME	30	101535	28	5	6	23.5	35	2.1	12799	2867	14984	66.7	45
HSBC HOLDINGS	34	93690	33	28	30	3.2	21	2.7	NA	4175	467068	14.8	61
SMITHKLINE BEECHAM	48	72922	13	19	21	26.0	39	1.4	12957	1791	14455	67.5	45
SHELL TRANSPORT & TRADING (1)	NR	72018	7	-2	0	21.1	MM	3.0	93692	350	110068	2.0	11
LLOYDS TSB GROUP	50	71953	13	-9	-7	6.0	21	2.7	NA	3399	231357	28.7	61
ASTRAZENECA	53	70891	40	-2	0	7.2	30	1.7	16645	2334	17030	23.9	45
VODAFONE GROUP	70	58972	19	74	77	129.9	65	0.5	3961	671	4012	198.8	55
BARCLAYS BANK	92	45828	30	14	16	3.8	21	2.3	NA	2198	376214a	18.2c	61
NATIONAL WESTMINSTER BANK	110	38754	23	26	28	3.0	18	2.5	NA	2150	286619	16.6	61
DIAGEO	119	36018	11	-7	-5	5.1	22	2.8	19285	2025	27662	22.9	43
HALIFAX	134	31453	13	-14	-13	2.8	17	2.5	NA	1877	201115	16.2	61
CABLE & WIRELESS	145	29593	12	9	11	5.7	23	1.8	12736b	1287b	20921	24.9c	55
ABBAY NATIONAL	151	29315	21	16	18	3.6	17	2.7	NA	1717	285024	21.1	61
GENERAL ELECTRIC CO.	176	25828	9	16	18	6.2	23	2.1	17798	1100	9316	26.4	34
PRUDENTIAL	178	25728	13	-1	1	4.9	18	2.6	18094	1411	190149	27.2	63
UNILEVER PLC (2)	NR	25624	9	-19	-18	11.2	19	2.2	43438	3157	34502	60.2	44
BG	212	21743	6	7	9	1.4	17	2.5	7173	1177	30840	8.3	12
ALLIED ZURICH (3)	NR	20064	13	NA	NA	2.0	58	1.6	25398	802	214651	3.5	63
REUTERS GROUP	238	19704	14	21	23	37.3	29	1.7	4861	699	4265	130.6	52
TESCO	248	19271	3	0	1	3.1	19	2.3	27509b	1019b	11925	16.3c	54
CGU	250	19142	15	-19	-18	1.4	22	3.9	14064	835	169726	6.2	63
ROYAL BANK OF SCOTLAND GROUP	258	18790	21	-26	28	5.5	17	1.9	NA	1005	127741	32.7	61
GRANADA GROUP	259	18759	20	9	11	7.8	22	1.3	6463	845	9276	35.8	53
MARKS & SPENCER	274	18081	6	-29	-28	2.2	25	3.7	13185b	726b	12262	8.9c	54
INVENSYS	282	17434	5	-27	-26	6.3	17	1.5	5884	504	6453	36.6	35
BANK OF SCOTLAND	286	17276	14	21	23	4.2	21	1.3	NA	833b	95868b	20.3	61
KINGFISHER	291	17104	13	42	45	4.7	26	1.7	11957b	648b	9833b	18.1	54
ORANGE	297	16598	14	84	88	-28.6	-108	0.0	1944	-157	2797	NA	55
BRITISH SKY BROADCASTING GROUP	303	16354	10	35	38	-34.0	59	1.0	2299	400	1358	NA	51
STANDARD CHARTERED	310	15845	15	22	24	3.6	21	2.2	NA	726	75643a	17.4c	61
RIO TINTO PLC (6)	NR	15532	15	18	20	3.1	19	3.5	8917	1068	15574	16.3	24
LEGAL & GENERAL GROUP	321	14938	3	6	8	3.5	35	2.0	5021	428	125996	10.0	63
BRITISH AMERICAN TOBACCO	328	14379	9	NA	NA	140.1	28	4.2	27858	555	11947	497.4	43
CABLE & WIRELESS COMMUNS.	333	14159	10	24	26	5.6	53	0.0	4202b	277b	8322	10.6c	55
CADBURY SCHWEPPE'S	339	13816	7	-11	-10	4.7	21	2.2	6583	641	7364	21.8	43
NORWICH UNION	342	13649	7	-2	0	1.5	16	2.9	8678	874	95948	9.4	63
BOOTS	386	11943	13	-13	-11	4.6	19	2.8	8051	621	4996	23.6	54
GKN	388	11897	17	12	14	7.3	23	1.6	5942	521	4172	32.3	38
BASS	392	11754	15	-20	-18	2.9	16	3.3	7389	763	11178	17.9	53
BRITISH AEROSPACE	398	11648	7	-25	-24	4.2	14	1.6	11290	824	14509	29.6	31
ROYAL & SUN ALLIANCE INSURANCE GROUP	399	11637	8	-22	-21	1.0	21	5.0	15588	617	103857	4.9	63
PEARSON	400	11630	19	4	6	6.9	28	1.8	3840	398	8524	24.4	51
RENTOKIL INITIAL	401	11610	4	-42	-41	38.3	21	1.5	4615	561	2825	185.2	52
J. SAINSBURY	402	11605	6	-23	-22	1.8	13	3.7	24844	797	14628	13.0	54
BAA	410	11380	11	-10	-8	1.9	20	2.1	2692	595	10312	9.4	52
GREAT UNIVERSAL STORES	436	10739	11	-25	-23	2.9	19	3.0	5391	626	7475	15.5	54
WOOLWICH	447	10496	7	24	26	3.5	20	2.5	NA	541	51161a	18.0c	61
RAILTRACK GROUP	449	10406	21	6	7	2.5	15	2.1	4125b	681b	9446	16.1c	52
SCOTTISH POWER	451	10323	9	-4	-3	3.8	13	4.2	5198b	808b	8941	29.8c	12
ALLIED DOMECO	468	10030	10	-4	-2	3.1	15	5.1	6907	696	7989	21.1	43
NATIONAL GRID GROUP	469	10023	7	11	12	7.0	19	3.1	2428b	521b	5487	36.8c	12
NATIONAL POWER	488	9652	8	-16	-15	3.0	13	5.9	4824b	758b	10373	23.9c	12
PENINSULAR & ORIENTAL STEAM NAVIGATION	499	9398	15	8	8	2.2	19	3.5	9478	498	10329	11.6	58
TELEWEST COMMUNICATIONS	516	9201	4	174	179	6.7	-14	0.0	864	-501	6025	NEG	55
WHITBREAD	538	8764	18	10	12	2.1	19	2.5	4756b	460b	6772b	11.0	53
ALLIANCE & LEICESTER	545	8642	15	9	11	2.9	17	2.7	NA	510	44215	17.2	61
ASDA GROUP	546	8639	3	-4	-3	2.4	17	2.0	12215	491	6178	14.0	54
BOC GROUP	555	8373	17	8	10	2.8	21	2.9	5282	415	7126	13.5	22
REED INTERNATIONAL (7)	NR	8319	7	-21	-20	4.9	17	3.3	5116	915	9235	28.4	51
SCOTTISH & SOUTHERN ENERGY	557	8302	9	3	5	2.5	14	3.6	1659	262	3166	18.1	12
CENTRICA	571	8102	2	26	28	5.8	29	2.0	11994	279	6394	19.8	12
IMPERIAL CHEMICAL INDUSTRIES	578	8025	11	-42	-41	37.4	25	4.7	14888	354	14482	148.2	22

THE BUSINESS WEEK GLOBAL 1000

COUNTRY RANK		GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/ BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	
65	HAYS	584	7988	9	2	4	24.9	32	1.3	2484	229	1444	78.8
66	LAND SECURITIES	589	7936	14	-9	-7	1.0	23	3.3	NA	346b	11368	4.2c
67	SUN LIFE & PROVINCIAL HOLDINGS	598	7747	8	-17	-16	2.4	22	2.9	6906	274	67589	10.8
68	DIXONS GROUP	599	7728	18	87	91	7.7	29	1.2	4447	254	2664	26.3
69	BRITISH AIRWAYS	613	7562	7	-32	-31	1.4	23	4.0	14293b	330b	18117	6.1c
70	SCOTTISH & NEWCASTLE BREWERIES	636	7204	12	-17	-16	2.1	14	3.3	5375	520	6499	14.7
71	POWERGEN	648	7049	11	-14	-12	2.8	13	4.7	3758	402	5366	21.4
72	COMPASS GROUP	655	6866	10	-2	0	-4.9	34	0.9	6533	184	1819	NA
73	BILLITON	669	6710	3	25	27	1.5	17	3.4	5446	481	8663	8.7
74	3I GROUP	671	6707	11	9	11	1.2	38	1.6	NA	177b	8376	3.2c
75	UNITED UTILITIES	678	6624	12	-11	-9	2.0	8	5.9	3650b	802b	9952	24.3c
76	HILTON GROUP	685	6524	4	-22	-21	2.2	15	2.8	7504	341	5206	14.7
77	BRITISH ENERGY	694	6434	9	-3	-1	2.5	19	2.9	3314b	322b	10428	13.1c
78	ROLLS-ROYCE	705	6278	4	-12	-10	2.3	16	2.5	7208	406	7665	14.9
79	WPP GROUP	709	6205	8	26	29	-147.3	26	0.5	12826	225	3173a	NA
80	SCHRODERS	715	6137	21	-29	-28	3.3	23	1.3	NA	269	21786	14.4
81	AMVESCAP	718	6123	9	-15	-13	11.5	21	1.4	NA	250	2583	54.5
82	ASSOCIATED BRITISH FOODS	727	6026	8	-18	-16	1.3	14	2.5	6737	425	6435	8.7
83	HANSON	740	5909	9	54	57	2.4	16	2.3	2926	362	7200	14.7
84	IMPERIAL TOBACCO GROUP	744	5862	11	48	50	-2.2	14	3.5	6459	370	1727	NA
85	EMI GROUP	774	5556	7	-16	-15	-5.3	24	3.6	3805b	231b	3387	NA
86	DAILY MAIL & GENERAL TRUST	775	5554	56	18	20	31.5	29	0.8	2188	193	1820	109.4
87	THAMES WATER	779	5549	16	-4	-2	1.6	9	4.3	2125b	615b	6818	17.0c
88	SECURICOR	783	5399	9	19	21	13.7	57	0.3	1915	94	1133	23.9
89	EMAP	821	5267	21	3	5	10.7	28	1.2	1239	152	1327	38.8
90	UNITED NEWS & MEDIA	833	5127	10	-26	-25	3.7	15	3.6	3065	330	3725	24.2
91	SEVERN TRENT	848	4959	15	-9	-8	1.4	10	4.5	2006	496	6847	13.8
92	CARLTON COMMUNICATIONS	858	4870	8	-1	1	6.3	17	2.9	2943	333	2349	38.2
93	BLUE CIRCLE INDUSTRIES	865	4828	6	-3	-2	2.4	14	3.9	3241	344	4860	17.1
94	MISYS	866	4806	8	-31	-29	-8.3	33	0.6	718	106	295	NA
95	BRITISH LAND	909	4575	9	-19	-18	1.0	34	1.8	NA	131	8949	2.9
96	STAGECOACH HOLDINGS	911	4560	3	-25	-24	5.0	19	1.3	2215	186	3096	26.9
97	RECKITT & COLMAN	913	4553	11	-45	-44	3.0	14	3.7	3531	315	4309	20.4
98	SMITHS INDUSTRIES	918	4521	15	-8	-7	12.6	18	2.2	1922	238	1278	70.3
99	NYCOMED AMERSHAM	920	4500	7	22	24	13.6	22	1.2	2122	201	2469	61.0
100	WOLSELEY	925	4476	8	13	15	3.0	14	2.6	7631	300	3843	21.2
101	SAFEWAY PLC	935	4374	4	-32	-31	1.4	12	5.6	12042b	390b	6565	12.2c
102	NEXT	942	4355	12	29	31	5.0	22	2.6	1987b	193b	1368b	22.7
103	SAGE GROUP	953	4279	35	43	46	-195.5	62	0.2	307	52	177	NA
104	GALLAHER GROUP	954	4274	6	23	25	-5.3	12	5.2	6822	349	3561	NA
105	WILLIAMS PLC	955	4271	6	-17	-16	-144.9	16	4.6	3923	280	2800	NA
106	BRITISH STEEL	963	4209	2	-14	-13	0.6	12	7.6	11138	362	12374	4.6
107	CANARY WHARF GROUP	969	4171	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
108	PROVIDENT FINANCIAL	1000	3966	15	-5	-4	8.6	23	2.4	NA	168	1451a	37.1c

CANADA

COUNTRY COMPOSITE		284351	34	1	2	2.8	27	1.9	139773	12771	1026738	12.6
1 NORTEL NETWORKS	84	49852	75	17	18	4.5	39	0.4	17575	1065	19732	11.6
2 BCE (BELL CANADA ENTERPRISES)	147	29536	46	-1	1	3.6	26	2.4	18591	1084	21719	13.8
3 SEAGRAM	221	21211	53	21	23	1.7	41	1.2	14668	498	35545	4.2
4 THOMSON	268	18433	30	6	8	2.7	37	2.2	6269	511	12447	7.5
5 TORONTO-DOMINION BANK	307	16046	54	20	22	3.1	22	1.7	NA	759	123133	14.2
6 ROYAL BANK OF CANADA	324	14580	46	-24	-23	2.2	13	2.7	NA	1235	185819	16.9
7 BANK OF NOVA SCOTIA	433	10816	22	-18	-17	1.8	12	2.6	NA	944	158182	15.1
8 BOMBARDIER	439	10608	16	21	23	4.9	28	1.0	7788b	375b	9665b	17.4
9 BANK OF MONTREAL	456	10231	39	-32	-31	1.7	12	3.3	NA	914	150735	14.1
10 CANADIAN IMPERIAL BANK OF COMMERCE	463	10115	25	-28	-27	1.6	16	3.3	NA	715	183135	10.1
11 IMASCO	478	9899	23	22	24	3.9	20	2.4	5813	502	34890	20.0
12 IMPERIAL OIL	568	8152	19	2	4	2.9	22	2.7	6096	375	6812a	12.9c
13 CANADIAN PACIFIC	606	7666	23	-21	-19	1.4	15	1.7	6874	543	13320	9.4
14 LOBLAW	634	7230	26	20	22	6.4	35	0.5	8463	177	2718a	18.3c
15 BARRICK GOLD	674	6674	17	-12	-11	1.8	21	1.2	1287	301	4655	8.6
16 TRANSCANADA PIPELINES	696	6410	14	-27	-26	1.8	17	5.5	11667	437	17310	10.6
17 ALCAN ALUMINIUM	703	6292	29	0	2	1.2	21	0.5	7789	399	9901	5.8
18 CANADIAN NATIONAL RAILWAY	713	6170	64	9	10	2.1	15	1.3	2791	385	7357	14.1
19 BCT.TELUS COMMUNICATIONS	762	5668	24	NA	NA	2.0	14	3.9	3909	408	5365	13.7
20 SHELL CANADA	783	5522	19	11	12	2.4	21	2.6	3013	293	3936	11.7
21 GEORGE WESTON	801	5411	41	14	16	3.3	12	0.7	9972	454	6119	27.9

	GLOBAL RANK	MARKET CAP \$ MIL	PER SHARE \$	CHG FROM 12/98	CHG FROM 12/97	PRICE EARN RATIO	P/E RATIO	YIELD %	SALES \$ MIL	PROFIT \$ MIL	ROA %	ROE %	MARKET CAP \$ MIL
2 NEWBRIDGE NETWORKS	839	5019	28	-1	1	5.9	34	0.0	1097	116	1332	17.2	34
3 MAGNA INTERNATIONAL	894	4648	60	-15	-13	1.4	16	1.7	3396f	134	6.45	8.9	37
4 SUNCOR ENERGY	981	4105	37	5	7	4.0	40	1.2	1422	127	2779	9.9	11
5 ALBERTA ENERGY	988	4056	29	31	33	2.1	130	0.0	1293	17	3968	1.6	11

DENMARK

UNTRY COMPOSITE		42275	4112	-12	-7	12.4	52	1.3	7298	1603	85435	20.1	
1 TELE DANMARK	426	11034	102	9	14	3.9	20	2.6	4779	564	6443	19.9	55
2 DAMPSKIBSSKABET SVENBORG	527	9012	12093	-8	-3	24.6	103	0.4	NA	74a	567a	23.7	58
3 DAMPSKIBSSKABET AF 1912	537	8808	8156	-11	-6	28.9	101	0.3	NA	71a	509a	28.5	58
4 NOVO-NORDISK	603	7691	102	-35	-32	3.3	24	1.1	2519	339	3845	14.0	45
5 DEN DANSKE BANK	756	5730	108	-13	-9	1.5	10	2.3	NA	556	74071a	14.4c	61

FINLAND

UNTRY COMPOSITE		125788	24	25	32	5.8	30	2.4	44109	4247	153219	17.5	
1 NOKIA	38	87202	72	118	130	18.5	44	0.7	13897	1753	10464	42.3	34
2 SONERA GROUP	332	14193	20	NA	NA	10.0	52	0.5	1692	262	2934	19.1	55
3 STORA ENSO	602	7698	10	-9	-4	1.5	42	3.7	10939	199	16074	3.5	23
4 UPM-KYMMENE	605	7680	29	0	5	1.6	8	3.9	8723	1073	11940	20.2	23
5 MERITA (8)	NR	4833	6	-8	-3	2.5	18	3.2	NA	733	100151	14.1	61
6 FORTUM	965	4182	5	NA	NA	1.0	18	2.5	8858	227	11656	5.8	12

FRANCE

UNTRY COMPOSITE		756399	154	7	13	4.1	29	2.1	543206	26498	2612023	12.4	
1 FRANCE TELECOM	43	79925	78	39	47	4.5	33	2.0	25704	2398	48136	13.5	55
2 AXA	99	41359	117	3	8	3.1	26	2.3	NA	1596	401324	11.8	63
3 L'OREAL	100	41244	610	23	29	8.3	55	0.7	11991	749	10991	15.1	45
4 VIVENDI	104	39699	74	12	18	3.8	31	2.0	33097	1169	51081	12.2	52
5 ELF AQUITAINE	106	39340	143	3	8	3.3	31	2.5	33633	1274	38343	10.5	11
6 CARREFOUR	137	30868	132	30	37	7.6	48	1.0	28583	642	18128	15.8	54
7 SANOFI-SYNTHELABO	138	30529	42	43	50	8.4	57	NA	6105	541	6757	14.8	45
8 TOTAL	141	30199	123	-1	4	3.0	33	2.5	25376	924	24158	9.2	11
9 SUEZ LYONNAISE DES EAUX	182	25247	168	-2	3	2.8	24	2.5	32704	1048	75594	11.8	52
10 LVMH MOET HENNESSY LOUIS VUITTON	186	24968	281	34	41	4.0	46	1.9	7233	548	16694	8.8	46
11 ALCATEL	191	23831	120	-44	-41	2.2	33	2.6	22174	731	30911	6.8	34
12 GROUPE DANONE	218	21503	278	3	8	3.1	33	1.7	13489	624	15687	9.5	44
13 PINAULT-PRINTEMPS-REDOUTE	224	20844	177	8	13	6.9	39	1.3	17222	530	13152	17.4	54
14 SOCIETE GENERALE	261	18734	183	-7	-3	1.9	14	3.2	NA	1119	399967	13.2	61
15 BANQUE NATIONALE DE PARIS	264	18582	85	0	5	1.7	13	2.8	NA	1162	338751	13.2	61
16 PARIBAS	279	17879	111	8	14	2.0	15	3.5	NA	1045	259188	13.7	61
17 RHONE-POULENC	281	17476	47	-15	-11	2.7	26	2.0	13799	672	25360	10.1	45
18 STMICROELECTRONICS	296	16602	117	45	52	4.7	39	0.6	4248	411	5446a	12.1c	35
19 COMPAGNIE DE SAINT-GOBAIN	326	14510	161	-19	-14	1.6	13	3.1	18585	1144	23133	12.6	21
20 L'AIR LIQUIDE	359	12894	155	-11	-7	3.1	24	2.4	6348	538	8868a	12.9c	22
21 PROMODES GROUP	370	12597	658	35	42	7.3	41	0.7	20459	305	10933	17.7	54
22 CAP GEMINI	450	10324	148	-1	4	4.9	52	0.9	4124	197	3847	9.4	52
23 CREDIT LYONNAIS	475	9933	36	9	14	0.9	32	0.0	NA	172	217828	2.6	61
24 LAFARGE	490	9642	94	-8	-3	2.1	20	3.1	10222	486	16643	10.4	21
25 GROUPE CASTORAMA	503	9346	245	39	46	8.6	108	1.2	3216	86	2895	8.0	54
26 SCHNEIDER ELECTRIC	507	9307	59	-30	-26	2.4	21	3.0	7952	426	8622	11.2	34
27 RENAULT	520	9128	38	-27	-24	1.1	6	3.1	38781	1407	39759	17.6	42
28 AGF	523	9067	49	-20	-16	1.7	17	3.6	13964	525	78755a	9.9c	63
29 CANAL PLUS	526	9017	287	58	66	6.0	-97	1.7	2581	-93	5474	NEG	51
30 ACCOR	533	8857	245	-11	-6	3.0	29	2.6	5863	310	9827	10.3	53
31 CREDIT COMMERCIAL DE FRANCE	569	8138	112	47	54	2.7	25	2.0	NA	333	65461	11.1	61
32 CASINO, GUICHARD-PERRACHON	579	8012	93	31	38	4.4	38	2.1	14762	225	8043	11.5	54
33 PEUGEOT	615	7516	150	-23	-19	0.9	15	1.6	35204	505	37440	5.7	42
34 BOUYGUES	649	7003	266	47	55	5.5	83	1.5	15422	84	13429	6.6	32
35 VALEO	677	6628	80	-15	-10	3.2	24	2.0	6277	271	6015	12.9	37
36 ALSTOM	683	6574	31	NA	NA	NA	21	2.5	14672b	316b	NA	NA	34
37 CHRISTIAN DIOR	700	6375	141	2	7	1.6	19	2.8	7436	345	22340	8.9	46
38 MICHELIN	734	5946	43	-30	-27	1.5	11	2.3	13021	559	13385	14.0	37
39 LEGRAND	747	5797	207	-25	-21	4.8	29	1.2	2270	202	3224	16.9	34
40 DEXIA FRANCE (9)	NR	5629	140	3	9	2.1	16	3.4	NA	647	207881	12.9	61
41 THOMSON-CSF	787	5510	33	-19	-15	2.4	-23	2.6	6439	-242	10407	NEG	31
42 SODEXHO ALLIANCE	798	5444	163	-12	-7	4.6	62	1.3	6530	87	5628	7.4	52
43 TFI	856	4892	233	65	74	12.0	43	2.3	1734	114	1552	27.9	51
44 LAGARDERE	869	4791	40	-9	-5	2.5	16	3.1	11151	292	10276	15.1	71
45 GROUPE SIDEL	885	4690	139	71	80	16.8	62	1.0	835	75	692	27.0	38

THE BUSINESS WEEK GLOBAL 1000

COUNTRY RANK		GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	
GERMANY													
COUNTRY COMPOSITE			820103	187	-14	-10	4.4	25	2.4	806395	31399	3023750	19.4
1	DEUTSCHE TELEKOM	23	115023	42	56	64	4.9	45	2.2	37250	1763	82743	10.8
2	DAIMLERCHRYSLER	39	86874	87	-12	-7	2.5	15	4.0	154615	5807	159738	16.9
3	ALLIANZ	61	66064	270	-15	-10	6.3	35	0.6	48187	1897	202737a	18.2c
4	MANNESMANN	75	53665	138	41	48	9.6	69	0.7	19882	502	18093	13.9
5	SIEMENS	109	38879	68	5	10	2.6	29	1.7	62756	1280	59732	9.1
6	SAP	113	37740	340	-34	-31	24.1	72	0.7	3209a	492a	2703a	33.5
7	DEUTSCHE BANK	131	32184	53	-38	-34	1.5	16	3.2	NA	1752	653459	9.4
8	MUNCHENER RUECK.	143	29815	169	-25	-21	7.6	33	0.4	21587	486	121162	23.2
9	VEBA	154	28629	57	-13	-9	2.5	22	2.8	40559	1248	44915	10.9
10	BAYER	156	28409	39	-19	-14	2.3	17	3.9	29264	1683	30508	13.7
11	VOLKSWAGEN	173	26276	63	-23	-19	2.8	12	1.8	71579	1182	62573	22.4
12	HOECHST	174	26145	44	-11	-6	3.1	31	2.6	23303	1010	29806	10.1
13	BASF	189	24327	39	-16	-11	1.9	15	4.3	30499	1772	27846	13.1
14	RWE	196	23177	44	-17	-13	5.6	23	3.0	32730	765	45605	24.3
15	HYPOVEREINSBANK	202	22244	54	-36	-33	1.9	22	2.3	NA	981	480481	8.3
16	DRESDNER BANK	272	18195	35	-37	-34	1.9	18	3.3	NA	991	356035a	10.4a
17	METRO	280	17814	63	4	9	4.4	36	2.4	48897	306	13551a	12.3c
18	BMW	302	16386	637	-38	-34	2.6	30	2.4	33663	481	31952	8.6
19	COMMERZBANK	341	13759	28	-32	-28	1.3	15	4.1	NA	930	340192	8.9
20	VIAG	382	12043	452	-19	-15	2.8	19	2.7	26192	620	31076	15.1
21	THYSSEN KRUPP	479	9894	19	-26	-22	1.6	6	5.6	23214	1014	24208	NA
22	ERGO VERSICHERUNGSGRUPPE	505	9329	124	-31	-27	4.1	27	1.1	10471	309	69451	14.9
23	HENKEL	518	9155	59	-25	-21	3.4	26	2.0	11376	350	9521	12.7
24	PREUSSAG	542	8700	52	46	53	4.8	31	1.8	18743	288	8804	15.3
25	DEUTSCHE LUFTHANSA	583	7991	21	-16	-12	2.6	10	4.0	12079	763	12818	24.4
26	SCHERING	641	7140	106	-10	-5	3.6	28	1.9	3426	255	4765	12.7
27	MERCK KGAA	746	5812	34	-13	-8	3.7	17	3.6	4327	333	5806	21.1
28	DEGUSSA-HUELS	748	5797	37	NA	NA	2.4	NA	NA	NA	NA	9301	NA
29	BEIERSDORF	784	5519	66	7	13	5.6	36	1.4	3491	168	2284	15.6
30	AACHENER UND MUENCHENER BETEILIGUNG	795	5458	106	-8	-3	2.7	21	1.4	NA	621	52687	12.5
31	VEW	813	5339	267	-18	-14	5.6	25	2.9	4573a	163a	7721a	22.8
32	LINDE	854	4900	583	-21	-17	2.1	19	2.9	5726	254	4997	10.8
33	HEIDELBERGER DRUCKMASCHINEN	905	4614	54	-25	-22	3.0	15	3.3	3666	267	3529	19.5
34	ADIDAS-SALOMON	937	4369	96	-45	-43	9.9	8	1.3	5283	214	3343	126.6
35	MAN	950	4296	31	-22	-18	2.3	15	2.8	13220	305	8052	15.5
36	PORSCHE	974	4143	2367	-14	-9	10.1	24	0.8	2627	148	1555	41.6
HONG KONG													
COUNTRY COMPOSITE			185555	5	38	38	2.1	31	3.1	29426	9340	210091	10.5
1	HUTCHISON WHAMPOA	128	32361	8	60	60	3.0	29	2.0	6626	1123	24947	10.3
2	HONG KONG TELECOMMUNICATIONS	164	27604	2	28	28	5.8	19	4.8	4179b	1484b	6986	31.0c
3	HANG SENG BANK	232	20216	11	42	42	3.6	23	4.2	NA	875	54197	15.8
4	SUN HUNG KAI PROPERTIES	239	19659	8	70	70	1.3	25	1.7	2994	936	21694	5.3
5	CHEUNG KONG HOLDINGS	256	18887	8	52	52	1.7	24	1.8	1530	788	14579	7.2
6	CLP HOLDINGS	389	11840	5	15	15	2.3	14	4.3	3098	1049	7110	16.2
7	HENDERSON LAND DEVELOPMENT	536	8816	5	45	45	1.4	35	3.8	NA	635	12149	4.1
8	SWIRE PACIFIC	639	7165	5	25	25	0.9	32	2.4	2179	227	11651	2.8
9	HONG KONG & CHINA GAS	672	6691	1	19	20	3.2	20	3.2	700	342	2474a	16.4c
10	HONGKONG ELECTRIC HOLDINGS	691	6448	3	9	9	2.4	10	5.8	1194	640	5037	23.3
11	WHARF (HOLDINGS)	731	6008	3	104	104	0.6	24	3.8	1286	248	15313a	2.4c
12	CITIC PACIFIC	794	5459	3	5	6	1.0	15	3.5	1766	362	8822	6.7
13	NEW WORLD DEVELOPMENT	797	5452	3	9	9	0.8	69	2.4	NA	276	13427	1.1
14	CATHAY PACIFIC AIRWAYS	896	4648	1	101	101	1.5	110	0.9	3442	42	8783	1.3
15	CHEUNG KONG INFRASTRUCTURE HOLDINGS	949	4302	2	-14	-14	1.8	13	2.6	431a	311a	2923a	14.3
IRELAND													
COUNTRY COMPOSITE			34750	26	1	7	3.6	19	1.3	5927	2041	120700	20.3
1	ALLIED IRISH BANKS	405	11477	13	0	7	3.9	17	2.2	NA	659	54759	22.7
2	BANK OF IRELAND	491	9605	19	-2	5	3.3	12	2.1	NA	803b	56642b	27.3
3	ELAN	646	7061	54	-12	-12	3.1	26	0.0	677	259	3799	11.7
4	CRH	681	6608	17	19	27	4.1	21	1.1	5250	319	5500	19.6
ITALY													
COUNTRY COMPOSITE			380470	7	-5	11	5.3	31	1.7	188896	13414	1031240	16.8
1	TELECOM ITALIA	58	66446	10	38	45	4.8	37	1.5	24487	2063	46840	13.0
2	ENI	83	50483	6	-11	-5	3.4	21	2.6	29555	2424	46571a	16.4c
3	TIM	95	43839	6	-2	4	38.0	33	1.3	6409	1360	4332a	116.8c
4	ASSICURAZIONI GENERALI	117	36556	36	11	17	4.6	39	0.6	31491	933	88346a	11.6a

INDUSTRY	GLOBAL RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANG. FROM 1998 U.S. \$	PRICE/ BOOK VALUE RATIO	P/E RATIO	ROE %	1998 REV. \$ MIL.	1998 PROF. \$ MIL.	1998 EPS \$	1998 DIV. \$	1998 PAYOUT RATIO	1998 ROA %	1998 ROE %
3 UNICREDITO ITALIANO	194	23255	5	14	10	3.5	46	1.3	NA	492	62964	7.8	61	61
6 SAN PAOLO-IMI	251	19129	14	-14	-9	2.0	20	3.6	NA	948	187147a	10.0c	61	61
7 FIAT GROUP	322	14901	3	27	-23	1.4	28	2.0	47396	648	67774	4.9	42	42
8 BANCA INTESA	330	14342	5	-18	-13	3.0	22	0.8	NA	609	159636	13.4	61	61
9 BANCA COMMERCIALE ITALIANA	358	12903	7	22	29	2.8	27	2.1	NA	482	109708a	10.4c	61	61
10 MEDIASET	473	9944	8	30	38	5.1	33	1.8	1968	297	3113a	15.3c	51	51
1 ISTITUTO NAZIONALE DELLE ASSICURAZIONI	501	9370	2	11	-6	2.1	19	2.1	5245	496	30155	11.2	63	63
2 OLIVETTI	504	9338	3	110	122	7.9	65	0.0	3845	134	4845a	12.1c	55	55
3 CONCESSIONI E COSTRUZIONI AUTOSTRADE	540	8721	7	76	86	5.2	35	1.7	1929	246	6240a	14.6c	52	52
4 ALLEANZA ASSICURAZIONI	541	8717	11	-12	-7	8.3	43	1.0	1740	212	12162a	19.3c	63	63
5 BANCA DI ROMA	596	7789	1	-29	-25	1.5	35	0.9	NA	224	111799a	4.2c	61	61
6 SEAT PAGINE GIALLE	670	6709	1	132	146	6.7	48	2.0	975	157	1777	13.9	52	52
7 MEDIOBANCA	693	6447	11	-17	-12	2.0	36	1.1	NA	178	24710	5.6	61	61
8 RAS	759	5704	10	-38	-34	1.7	22	2.2	8402	273	28470a	7.9c	63	63
9 EDISON	771	5582	9	-9	-3	3.5	25	1.4	1444	220	3256	13.6	12	12
10 PIRELLI	780	5548	3	-14	-10	2.4	20	2.7	5722	288	6319a	12.2c	37	37
1 BANCA FIDEURAM	827	5196	6	-9	-4	7.8	33	1.6	NA	159	4213	24.0	61	61
2 MONTEDISON	857	4891	1	-36	-33	1.2	14	3.1	13395	353	17242	8.1	71	71
3 ALITALIA	891	4659	3	-34	-30	4.1	21	1.4	4894	220	3622a	19.4c	56	56

JAPAN

COUNTRY COMPOSITE		1904866	879	29	13	2.7	37	0.8	1947066	-4392	7183157	6.9	
1 NIPPON TELEGRAPH & TELEPHONE	13	156775	9853	20	6	4.0	32	0.4	79970b	4948b	124170	12.6c	55
2 NTT DOCOMO	27	106142	55421	NA	NA	NA	NA	0.0	25617b	1682b	18833	NA	55
3 TOYOTA MOTOR	32	99826	27	7	-6	2.0	34	0.7	104684b	2924b	113751	6.0c	42
4 BANK OF TOKYO-MITSUBISHI	65	61805	13	29	13	3.1	-87	0.5	NA	-713b	755974	NEG	61
5 HONDA MOTOR	103	39842	41	20	6	3.0	16	0.4	51152b	2505b	39536	19.0c	42
6 TAKEDA CHEMICAL INDUSTRIES	107	39281	44	71	50	5.7	52	0.5	6935b	753b	10642	10.9c	45
7 SONY	112	37844	92	9	-4	2.5	26	0.5	55787b	1470b	52572	9.8c	41
8 MATSUSHITA ELECTRIC INDUSTRIAL	115	36998	18	15	1	1.2	333	0.6	62728b	111b	70311	0.4c	41
9 SUMITOMO BANK	116	36621	12	25	10	2.7	-8	0.4	NA	-4671b	528507	NEG	61
10 SEVEN-ELEVEN JAPAN	118	36210	87	36	19	10.4	71	0.4	14374	501	4844	14.7c	54
1 FUJITSU	136	30984	17	44	26	3.2	-278	0.5	43048b	-112b	42063	NEG	33
2 TOKYO ELECTRIC POWER	150	29324	22	13	0	2.3	37	1.9	41792b	800b	117795	6.2c	12
3 SANWA BANK	158	28332	10	11	-2	2.0	-7	0.6	NA	-3864b	450905	NEG	61
4 ITO-YOKADO	185	24982	60	21	6	3.2	46	0.5	26848b	547b	16210	7.1c	54
5 HITACHI LTD.	187	24610	7	12	-2	0.9	-9	0.6	65520b	-2782b	83033	NEG	34
6 DAI-ICHI KANGYO BANK	203	22241	7	14	0	1.5	-6	0.7	NA	-3656b	473196	NEG	61
7 CANON	206	22081	25	7	-6	2.3	25	0.6	23205	900	22338	9.5	33
8 EAST JAPAN RAILWAY	215	21676	5419	14	0	3.5	120	0.8	20392b	180b	60608	2.9c	57
9 BRIDGESTONE	217	21580	25	12	-2	3.3	25	0.5	18364	859	15799	13.2	37
10 FUJI BANK	222	21193	6	25	10	1.0	-5	0.9	NA	-3465b	475660b	NEG	61
1 JAPAN TOBACCO	235	20034	10017	45	27	1.8	33	0.6	31857b	613b	16903	5.5c	43
2 NOMURA SECURITIES	237	19743	10	-8	-19	1.6	-6	0.8	NA	-3264b	190401	NEG	62
3 KANSAI ELECTRIC POWER	240	19646	20	26	11	1.9	46	2.0	21323b	431b	56959	4.2c	12
4 TOSHIBA	241	19611	6	45	27	2.0	-172	0.8	43516b	-114b	49773	NEG	34
5 NTT DATA	255	18908	6741	68	48	10.1	141	0.1	5831b	134b	7395	7.1c	52
6 INDUSTRIAL BANK OF JAPAN	266	18508	7	14	0	1.6	-12	0.8	NA	-1488b	404202	NEG	61
7 FUJI PHOTO FILM	267	18465	36	6	-7	1.5	31	0.5	11805b	587b	17402b	4.9	46
8 NEC	278	17901	11	8	-5	2.0	52	0.8	40241	339	40838	3.9	34
9 NINTENDO	294	16866	119	27	12	3.2	25	0.9	4387	687	6968	13.2	46
10 KAO	295	16831	27	81	59	4.8	74	0.5	7449	201	6394	6.5	44
1 TOKIO MARINE & FIRE	298	16541	11	13	-1	3.1	65	0.7	15561	277	44315	4.7c	63
2 DENSO	299	16540	18	8	-5	1.9	34	0.7	14441b	484b	14330	5.5c	37
3 ROHM	315	15412	131	26	11	4.7	36	0.1	2698b	429b	4385	13.0c	35
4 NIPPON STEEL	334	14140	2	22	8	2.0	293	1.0	25260	49	38349	0.7	25
5 SAKURA BANK	346	13410	3	11	-3	0.9	-3	1.8	NA	-3935b	420245	NEG	61
6 TOKAI BANK	352	13126	6	5	-7	1.4	-6	1.0	NA	-2354b	275077	NEG	61
7 MURATA MFG.	353	13096	55	88	65	3.1	55	0.3	3014b	237b	5611	5.5c	35
8 ASAH BANK	361	12789	5	22	7	1.4	-12	1.1	NA	-870	239555	NEG	61
9 SHARP	367	12625	11	49	31	1.6	332	0.9	14332b	38b	17112	0.5c	41
10 MITSUBISHI HEAVY INDUSTRIES	369	12601	4	7	-6	1.1	25	2.2	25421	498	38851	4.4	38
1 CHUBU ELECTRIC POWER	372	12514	17	14	0	1.6	37	2.4	17857b	338b	51444	4.4c	12
2 MITSUBISHI ESTATE	374	12491	10	9	-4	3.4	48	0.7	4505	261	17269	7.0	64
3 SHIN-ETSU CHEMICAL	376	12489	30	64	44	2.9	35	0.2	5278b	356b	8898	8.4c	22
4 YAMANOUCHI PHARMACEUTICAL	380	12161	35	59	40	2.9	31	0.5	3475b	394b	6623	9.2c	45
5 MATSUSHITA COMMUNICATION INDUSTRIAL	383	12034	64	127	100	5.5	55	0.2	7316b	220b	4196	10.1c	34
6 KIRIN BREWERY	387	11913	12	24	9	2.0	54	0.9	12129	222	11849	3.7	43
7 CENTRAL JAPAN RAILWAY	393	11734	5238	43	26	3.0	131	0.8	10134b	89b	49987	2.3c	57
8 MITSUBISHI TRUST & BANKING	397	11655	9	1	-11	1.8	-9	0.7	NA	-1337b	155715	NEG	61

THE BUSINESS WEEK GLOBAL 1000

COUNTRY RANK	GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/ BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	INDUSTRY
49 ACOM	407	11437	78	76 55	4.8	25	0.5	NA	464b*	11792*	19.3c	42
50 DAI NIPPON PRINTING	413	11231	15	-10 -21	1.5	45	1.0	10509b	250b	11911	3.4c	42
51 TDK	417	11187	84	7 -6	2.6	30	0.6	5552b	378b	5935	8.8c	45
52 TAISHO PHARMACEUTICAL	425	11063	32	66 46	3.6	46	0.5	1904b	243b	3683*	NA	45
53 NISSAN MOTOR	432	10853	4	42 25	1.0	-48	0.0	54025b	-228b	64730	NEG	42
54 SECOM	438	10665	92	61 42	4.6	68	0.6	2600	156	3940	6.7	42
55 SANKYO	443	10529	23	-5 -16	2.6	20	0.9	5065	521	6894	12.6	45
56 DDI	444	10512	4623	61 41	5.6	75	0.3	10235b	140b	10647	7.5c	45
57 FANUC	459	10206	43	16 2	2.2	29	0.5	1856b	354b	4878b	7.7	45
58 MITSUI & CO.	462	10142	6	25 10	1.8	41	1.0	114783b	245b	60296	4.2c	42
59 KYOCERA	467	10079	53	9 -5	1.6	43	0.9	5955b	232b	8413	3.7c	45
60 TOKYO ELECTRON	486	9678	55	75 53	4.5	627	0.2	2577b	15b	4053	0.7c	45
61 SEIBU RAILWAY	497	9446	22	-28 -36	26.4	65	0.2	3981	145	9254	40.7	42
62 MITSUBISHI CORP.	502	9367	6	-1 -13	1.1	35	1.1	129937	391	78183	3.2	42
63 SHIZUOKA BANK	553	8385	11	-2 -14	2.2	62	0.5	NA	136b	63119*	NA	45
64 OSAKA GAS	562	8212	3	52 34	2.7	46	1.3	6826b	177b	9700	5.7c	45
65 WEST JAPAN RAILWAY	565	8161	4081	9 -4	3.0	-110	1.0	9935b	-74b	21613	NEG	42
66 TOPPAN PRINTING	574	8074	12	6 -7	1.5	37	1.1	10017b	219b	10679	4.0c	42
67 KINKI NIPPON RAILWAY	587	7983	5	2 -10	4.5	310	0.8	7519	26	13198	1.4	42
68 SUMITOMO ELECTRIC INDUSTRIES	588	7946	11	4 -8	1.8	48	0.8	10518b	167b	11733	3.8c	42
69 SONY MUSIC ENTERTAINMENT	591	7932	73	82 60	3.7	30	0.4	1861b	262b	2686	12.0c	42
70 RICOH	592	7870	11	5 -7	2.0	31	0.8	11741b	252b	13634	6.5c	42
71 TOHOKU ELECTRIC POWER	594	7804	16	15 1	1.5	27	2.7	12480b	292b	32702	5.5c	42
72 SEKISUI HOUSE	600	7723	11	46 28	1.2	58	1.4	10794b	188b	13426	2.0c	42
73 ADVANTEST	601	7716	78	26 11	5.1	50	0.4	1164b	155b	2454	10.1c	42
74 ASAHI CHEMICAL INDUSTRY	604	7687	5	54 35	2.1	54	0.9	9621b	143b	9909	3.8c	42
75 ASAHI GLASS	614	7526	6	19 4	1.5	180	1.2	10518b	42b	14866	0.8c	42
76 SUMITOMO CORP.	616	7473	7	33 17	1.6	-40	0.9	93561b	-185b	46933	NEG	42
77 DAIWA SECURITIES GROUP	622	7381	6	46 28	1.2	-7	0.7	NA	-1050b	83193	NEG	42
78 MATSUSHITA ELECTRIC WORKS	631	7263	10	20 5	1.7	54	1.0	9299	135	9706	3.2	42
79 KYUSHU ELECTRIC POWER	632	7261	15	4 -9	1.3	34	2.7	11742b	212b	34198	3.9c	42
80 TOKYO GAS	637	7175	3	23 8	2.1	51	1.6	8286	142	14128	4.1	42
81 YAMATO TRANSPORT	644	7071	16	42 25	3.0	49	0.7	6303b	142b	4754	6.1c	42
82 MITSUBISHI ELECTRIC	647	7052	3	39 22	1.4	-8	0.0	31211	-870	34796	NEG	42
83 NIKKO SECURITIES	651	6987	4	37 20	1.3	-5	0.6	NA	-1457b	75179	NEG	42
84 AJINOMOTO	652	6905	11	27 11	2.2	64	0.8	6688b	109b	6803	3.4c	42
85 SUZUKI MOTOR	653	6905	14	75 54	2.1	35	0.4	11953b	200b	8517	6.0c	42
86 MITSUI FUDOSAN	664	6738	8	3 -10	1.6	-26	0.5	9514	-259	25508	NEG	42
87 TORAY INDUSTRIES	673	6674	5	-4 -16	1.7	100	1.2	8211b	67b	11719	1.6c	42
88 SUMITOMO CHEMICAL	684	6538	4	50 32	2.7	40	1.0	7617b	165b	11297	6.8c	42
89 ASAHI BREWERIES	692	6448	13	3 -9	2.0	NM	0.7	11143	5	12472	0.2	42
90 SANYO ELECTRIC	706	6254	3	15 1	1.0	-29	1.3	14928b	-213b	21691	NEG	42
91 JAPAN TELECOM	712	6170	13794	32 16	2.8	125	0.4	3515b	50b	4602	2.3c	42
92 PROMISE	717	6128	51	22 7	2.5	18	1.0	NA	334b	9861	13.7c	42
93 KAWASAKI STEEL	719	6114	2	17 3	2.0	-7	1.3	8986b	-935b	16190b	NEG	42
94 SHISEIDO	724	6039	14	25 10	1.8	71	0.8	4962b	85b	5143	2.5c	42
95 JUSCO	726	6029	19	7 -6	2.3	41	1.0	20280b	149b	13166	5.6c	42
96 NIPPON EXPRESS	732	5998	6	2 -11	2.3	29	1.2	13465b	206b	9166	7.8c	42
97 SMC	739	5910	89	10 -3	3.5	46	0.4	1355	128	3156	7.6c	42
98 KOMATSU	745	5815	6	43 26	1.4	76	1.1	9065	158	12822	1.8	42
99 SUMITOMO TRUST & BANKING	753	5734	4	-20 -30	1.0	-5	1.4	NA	-1123b	126157	NEG	42
100 MAZDA MOTOR	757	5711	5	40 23	2.1	18	0.7	16914b	318b	11958	11.4c	42
101 NIPPON MITSUBISHI OIL	758	5706	4	25 10	0.9	51	1.5	21562	94	23431	1.8	42
102 MITSUBISHI CHEMICAL	763	5648	3	51 33	1.5	-25	0.6	12562b	-226b	16937	NEG	42
103 CHUGOKU ELECTRIC POWER	764	5636	15	8 -5	1.4	23	2.7	8531b	241b	25185	6.2c	42
104 HOYA	765	5635	49	54 35	4.5	38	0.5	1653b	146b	1964	11.7c	42
105 KEYENCE	767	5623	149	24 9	4.8	52	0.1	535b	108b	1308	9.2c	42
106 DAIWA HOUSE INDUSTRY	770	5613	11	38 21	1.2	34	1.3	8784	167	8318	3.4	42
107 MARUI	781	5539	15	-2 -14	1.6	41	1.2	4501	136	6169	4.0	42
108 OJI PAPER	786	5515	5	26 11	1.5	-54	1.2	9935b	-102b	14742	NEG	42
109 EISAI	791	5476	18	39 22	2.2	42	1.0	2339b	130b	3805b	5.1	42
110 JAPAN AIRLINES	793	5463	3	20 5	3.6	-11	0.8	12985	-517	16772	NEG	42
111 ORIX	806	5374	83	27 12	2.1	28	0.2	NA	210b	45768	7.3c	42
112 FUJISAWA PHARMACEUTICAL	835	5080	16	69 48	2.6	70	0.5	2277b	73b	4184	3.8c	42
113 YASUDA FIRE & MARINE INSURANCE	840	5010	6	31 15	2.3	43	1.0	7785	117	30799	5.4	42
114 TOYODA AUTOMATIC LOOM WORKS	846	4966	18	1 -11	2.0	59	0.8	4589b	85b	4869	3.4c	42
115 NICHIEI	852	4940	75	11 -2	2.9	18	0.8	NA	272b	4604	15.7c	42
116 TERUMO	853	4934	23	55 36	4.6	41	0.3	1319b	122b	1799	11.3c	42
117 NIPPON YUSEN	867	4802	4	14 0	2.3	47	0.8	8867b	102b	11947	5.0c	42
118 NIKON	868	4793	13	79 57	3.4	70	0.2	3056	68	4165	4.9	42
119 BENESSE	893	4650	87	147 117	4.3	35	0.5	2134b	132b	2277	12.2c	42
120 SUMITOMO METAL INDUSTRIES	904	4623	1	-18 -28	0.9	-8	0.0	11060b	-570b	20472	NEG	42



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121	NIPPON PAPER INDUSTRIES	907	4595	5	12	-1	1.6	30	1.4	8523	151	10065	5.3
122	BANYU PHARMACEUTICAL	916	4530	17	43	25	2.8	42	0.6	1259b*	108b*	2006*	6.6c
123	ONO PHARMACEUTICAL	924	4481	36	63	44	2.4	22	0.6	996*	201*	2498*	10.9
124	TOYO SEIKAN KAISHA	928	4445	20	69	49	1.2	37	0.3	5849	121	5942	3.3
125	SUMITOMO MARINE & FIRE INSURANCE	931	4434	7	18	4	2.0	48	0.9	4434b*	93b*	23524*	4.2c
126	ALL NIPPON AIRWAYS	932	4418	3	-17	-27	4.6	-100	0.0	8867	-44	11350	NEG
127	NIPPON TELEVISION NETWORK	936	4373	345	15	1	2.9	22	0.3	2660	199	2782	13.1
128	MITSUBISHI MOTORS	952	4291	5	80	58	1.5	-5	0.0	30707	-836	27674	NEG
129	DAIICHI PHARMACEUTICAL	958	4259	15	15	1	1.6	25	1.0	2359b	168b	3877b	6.4
130	KDD	966	4181	55	55	36	1.4	-264	0.8	3331b	-16b	7593b	NEG
131	KUBOTA	971	4155	3	22	7	1.4	34	1.7	8019b	124b	10767	4.3c
132	TOSTEM	972	4153	19	48	30	1.5	-78	0.6	4889	-53	5727	NEG
133	SHIKOKU ELECTRIC POWER	975	4142	15	6	-7	1.4	30	2.8	4675b	138b	12232	4.8c
134	FAMILYMART	984	4076	42	13	-1	5.0	32	0.7	1217b	127b	1714	15.5c
135	mitsui chemicals	997	3989	5	97	74	1.5	41	1.0	5593	96	10659	3.7

NETHERLANDS

COUNTRY COMPOSITE		498991	48	-4	10	8.8	50	1.6	262087	16855	1597596	27.0
1 ROYAL DUTCH PETROLEUM (1)	NR	119300	56	-2	3	3.5	428	2.7	93692	350	110068	0.8
2 ING GROEP	81	50763	53	-22	-18	1.7	18	2.4	NA	2783	411840	9.2
3 AEGON	89	47866	82	2	8	5.8	36	1.3	12045	1300	136815	16.1
4 UNILEVER NV (2)	NR	38148	67	-17	-13	13.6	22	2.0	42169	3063	31793	61.1
5 ABN AMRO HOLDING	133	31733	22	-9	-5	2.9	17	2.7	NA	1822	450589	16.5
6 ROYAL PHILIPS ELECTRONICS	139	30410	90	-9	-4	2.2	83	1.2	31763	387	29359	2.6
7 KONINKLIJKE KPN	201	22711	48	40	47	3.7	32	2.2	8385	717	14213	11.6
8 KONINKLIJKE AHOLD	207	22008	35	11	17	13.6	39	1.2	27619	702	11916	35.2
9 EQUANT	226	20716	83	NA	NA	24.7	-6	0.0	724	-35	1111	NEG
10 HEINEKEN	290	17136	55	42	49	7.2	37	0.6	6541	464	5535	19.4
11 FORTIS (NL) (4)	NR	13041	33	8	14	3.4	21	2.0	NA	1652	352454	16.3
12 TNT POST GROEP	381	12132	26	NA	NA	6.3	31	1.5	7726	388	5421	20.0
13 AKZO NOBEL	390	11827	41	-21	-17	6.2	16	2.5	13017	771	12473	39.9
14 WOLTERS KLUWER	406	11445	41	18	24	10.8	35	1.0	2856	322	4946	30.6
15 ELSEVIER (7)	NR	8632	13	-17	-13	5.5	21	3.2	5116	915	9235	26.5
16 VERENIGDE NEDERLANDSE ULTGEVERSBEDRIJVE	575	8067	42	24	30	13.4	33	1.1	2531	242	3973	40.2
17 DORDTSCHES PETROLEUM	643	7093	47	-14	-10	11.9	35	3.3	NAa	199a	578a	34.5
18 HEINEKEN HOLDING	701	6366	40	20	26	5.3	27	0.8	NA	232	1229	19.4
19 ASM LITHOGRAPHY HOLDING	714	6169	45	9	14	11.8	95	0.0	813	65	978	12.4
20 RANDSTAD HOLDING	863	4841	42	-25	-21	12.6	31	1.3	4405	159	1399	41.4
21 KONINKLIJKE NUMICO	906	4602	36	2	7	19.9	29	1.3	1645	160	974	69.3
22 GUCCI GROUP	998	3983	66	45	53	8.9	20	0.6	1043b	195b	697	43.6c

NEW ZEALAND

COUNTRY COMPOSITE		7406	4	-8	-8	12.8	16	5.8	1835	468	2872	80.7
1 TELECOM CORP. OF NEW ZEALAND	620	7406	4	-8	-8	12.8	16	5.8	1835b	468b	2872b	80.7

NORWAY

COUNTRY COMPOSITE		9074	40	-13	-8	1.7	18	2.4	12335	509	14390	9.2
1 NORSK HYDRO	522	9074	40	-13	-8	1.7	18	2.4	12335	509	14390	9.2

PORTUGAL

COUNTRY COMPOSITE		25023	30	-21	-16	3.2	19	2.8	6197	1287	55989	17.8
1 ELECTRICIDADE DE PORTUGAL (EDP)	421	11106	19	-30	-26	1.9	21	3.9	3139	545	12927	9.1
2 PORTUGAL TELECOM	551	8520	45	-15	-10	4.1	17	2.3	3058	460	9675	24.1
3 BANCO COMERCIAL PORTUGUES (BCP)	804	5396	27	-17	-13	3.7	18	2.2	NA	282	33387	20.3

SINGAPORE

COUNTRY COMPOSITE		76890	8	65	71	2.9	41	1.0	7901	2617	167929	9.2
1 SINGAPORE TELECOMMUNICATIONS	181	25446	2	18	22	6.4	23	1.3	2863	1093	6773	28.2
2 SINGAPORE AIRLINES	420	11146	9	56	61	1.6	19	1.2	4517b	599b	9964b	8.5
3 DEVELOPMENT BANK OF SINGAPORE	472	9949	10	72	77	2.1	75	0.7	NA	129	57344	2.8
4 OCBC OVERSEAS CHINESE BANK	496	9477	8	95	102	2.4	38	0.9	NA	246	32293	6.3
5 UNITED OVERSEAS BANK	687	6515	7	67	73	2.0	31	1.2	NA	213	29241	6.6
6 SINGAPORE PRESS HOLDINGS	832	5135	14	69	74	4.2	32	1.3	521	161	1925	13.0
7 CITY DEVELOPMENTS	899	4641	6	60	65	2.6	65	0.6	NA	72	5320	4.0
8 OVERSEAS UNION BANK	908	4582	5	85	90	1.9	44	1.0	NA	105	25069	4.4



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SPAIN												
COUNTRY COMPOSITE		204419	32	-2	3	3.5	24	2.1	54481	7838	612261	14.8
1 TELEFONICA	80	51151	48	12	18	3.6	36	0.0	18214	1364	51653	10.0
2 BANCO SANTANDER CENTRAL HISPANO	111	38230	21	-15	-11	3.8	28	2.8	NA	1303	246032	13.7
3 BANCO BILBAO VIZCAYA	142	30138	15	-13	-9	4.7	28	1.6	NA	1026	139580	17.2
4 ENDESA	230	20432	21	-11	-6	2.4	18	2.6	7129	1144	27389a	13.8c
5 REPSOL	305	16256	18	-3	3	2.7	18	2.5	19803	912	17919	15.0
6 IBERDROLA	349	13257	15	-11	-6	1.7	19	3.3	4326	694	17508a	9.0c
7 GAS NATURAL SDG	394	11705	78	15	21	4.6	30	0.7	2798	366	6916	15.1
8 ARGENTARIA, CORP. BANCARIA DE ESPANA	414	11225	23	7	13	3.2	23	2.2	NA	459	72849	13.7
9 BANCO POPULAR ESPANOL	585	7988	72	-8	-3	6.2	19	2.8	NA	424	25191	33.4
10 UNION ELECTRICA FENOSA	992	4036	13	7	12	1.7	22	2.7	2210a	146a	7223a	7.5c

SWEDEN

COUNTRY COMPOSITE		174314	20	-5	4	4.7	-12	2.3	117777	8694	528846	17.1	
1	L.M. ERICSSON	77	52568	27	-6	4	7.7	37	0.9	21416	1514	19445	20.5
2	HENNES & MAURITZ	260	18738	23	61	77	21.3	71	0.5	2617	266	1330	30.2
3	ABB AB (5)	NR	12688	14	-16	-8	4.9	20	1.9	30872	1305	32383	24.1
4	VOLVO	422	11091	25	-21	-13	1.5	11	2.8	24726	1003	23737	13.2
5	SKANDIA FORSAKRING	543	8676	17	16	28	5.5	-584	0.6	1690	144	33753a	NEG
6	SVENSKA HANDELSBANKEN	549	8525	36	-14	-6	2.3	13	2.6	NA	700	107577	17.9
7	INVESTOR	566	8156	11	-22	-15	1.9	16	3.0	NA	402	6661	12.1
8	NORDBANKEN HOLDING (8)	NR	7774	6	-14	-5	2.7	19	3.1	NA	720	106130	14.2
9	FOERENINGSSPARBANKEN	619	7436	21	-30	-23	2.4	12	3.9	NA	540	83598	19.5
10	SKANDINAVISKA ENSKILDA BANKEN	642	7104	12	-28	-20	2.2	16	3.4	NA	502	80081	13.5
11	ELECTROLUX	650	6994	19	-4	5	2.6	17	1.8	13647	376	9671	14.9
12	SANDVIK	777	5550	21	-29	-22	2.8	25	3.8	4923	243	4831	11.3
13	SCANIA	834	5115	26	4	14	4.9	17	2.9	5262	261	4439a	28.8c
14	SECURITAS	880	4719	15	52	67	8.0	78	0.7	1592	61	1794	10.3
15	SVENSKA CELLULOSA AKTIEBOLAGET	887	4676	24	-14	-6	1.5	13	3.2	7115	392	9100	11.2
16	ATLAS COPCO	919	4503	25	-15	-6	2.7	19	2.1	3918	265	4316	14.4

SWITZERLAND

COUNTRY COMPOSITE	557262	1739	-11	-8	4.3	28	1.3	218310	21991	1553250	17.5	
1 ROCHE HOLDING	28	103719	17481	6	9	11.0	52	0.3	16164	2879	36625	21.0
2 NOVARTIS	29	101626	1484	-13	-10	6.2	27	1.1	20437a	3415a	33970a	22.5
3 NESTLE	51	71577	1824	-15	-12	5.1	25	1.4	47026	2812	36994	19.9
4 UBS	64	63407	295	-12	-10	3.0	29	2.2	NA	1986	618808	10.2
5 CREDIT SUISSE GROUP	88	48112	181	-18	-15	3.3	24	1.8	NA	2011	427631	13.7
6 ZURICH ALLIED (3)	NR	28988	597	-4	-1	2.5	63	1.5	25398	802	214651	3.9
7 SWISS RE	165	27571	1927	-17	-14	3.7	17	1.6	10709	1639	57876	21.7
8 SWISSCOM	170	26659	362	NA	NA	7.6	18	2.0	6857	1359	11106	42.0
9 ABB AG (5)	NR	13097	1416	-17	-14	5.0	20	1.9	30872	1305	32383	24.3
10 COMPAGNIE FINANCIERE RICHEMONT	509	9260	1619	13	17	2.5	15	1.1	7475	619	11706	16.2
11 HOLDERBANK FINANCIERE GLARUS	512	9225	1203	-6	-3	2.0	19	1.1	7385	447	12044	10.1
12 ADECCO	528	8986	530	29	33	6.9	31	0.9	10028	266	3756a	22.1c
13 ALUSUISSE-LONZA GROUP	621	7387	1175	-12	-9	3.6	21	1.4	6296	347	5586	17.1
14 RENTENANSTALT	623	7353	626	-23	-20	NA	41	0.9	10984	179	NA	NA
15 CLARIANT	675	6654	457	-30	-28	4.0	20	1.3	6250	340	6318	20.2
16 ARES-SERONO	789	5498	1468	-10	-7	7.4	57	0.4	918	76	1546	13.1
17 CIBA SPEZIALITAETENCHEMIE HOLDING	850	4944	74	-48	-46	2.3	18	1.8	5521	267	8091	12.4
18 SWATCH GROUP	889	4669	680	-21	-19	2.7	15	1.0	1947a	218a	2381a	17.8
19 BALOISE HOLDING	951	4296	733	-8	-5	1.3	18	1.7	4043	240	28613	7.0
20 PHARMA VISION 2000	960	4236	655	2	5	1.9	NA	0.0	NA	784*	3166*	NA

UNITED STATES

COUNTRY COMPOSITE		11273083	203	39	39	7.3	36	1.3	4222612	346149	13765011	21.8	
1	MICROSOFT	1	407223	81	90	90	25.5	58	0.0	14484	4490	22357	43.9
2	GENERAL ELECTRIC	2	333050	102	22	22	8.6	35	1.4	100469	9296	355935	24.6
3	INTERNATIONAL BUSINESS MACHINES	3	214810	116	97	97	11.2	32	0.4	81667	6328	86100	35.1
4	EXXON	4	193919	80	13	13	4.4	35	2.1	115417	6370	92630	12.6
5	WAL-MART STORES	6	189549	43	55	55	9.0	40	0.5	137634b	4430b	49996b	22.3
6	AT&T	7	186144	56	37	37	5.7	30	1.6	53223	5109	59550	18.8
7	INTEL	8	180244	54	51	51	7.7	27	0.2	26273	6068	31471	28.8
8	CISCO SYSTEMS	9	174094	109	116	116	24.0	74	0.0	8459	1879	8917	32.5
9	COCA-COLA	11	168990	69	-13	-13	20.1	50	0.9	18813	3533	19145	40.6
10	MERCK	12	159797	68	16	16	12.5	30	1.6	26898	5248	31853	41.9
11	MCI WORLDCOM	14	152242	86	90	90	3.4	79	0.0	16496	1101	86401	4.3
12	CITIGROUP	15	150936	66	8	8	3.7	27	1.1	NA	5807	668641	13.9



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13	LUCENT TECHNOLOGIES	16	150338	57	60	60	27.1	100	0.1	30147	970	26720	27.1
14	AMERICAN INTERNATIONAL GROUP (10)	17	141616	114	38	38	4.6	31	0.2	33239	3766	194398	14.9
15	PFIZER	18	138370	107	2	2	15.3	48	0.8	13544	2627	18302	31.6
16	BRISTOL-MYERS SQUIBB	19	136526	69	28	28	18.1	36	1.3	18284	3636	16272	49.9
17	AMERICA ONLINE	20	129071	119	473	473	66.8	186	0.0	3052	-66	3813	35.9
18	JOHNSON & JOHNSON	21	124635	93	34	34	9.2	40	1.2	23657	3059	26211	22.9
19	PROCTER & GAMBLE	22	124049	93	11	11	12.0	32	1.2	37154	3780	30966	38.0
20	BANK OF AMERICA	24	112872	65	-14	-14	2.4	18	2.8	NA	5606	617679	13.3
21	BERKSHIRE HATHAWAY (10)	25	109368	72000	2	2	1.9	35	0.0	13832	2830	122237	5.4
22	SBC COMMUNICATIONS	31	100325	51	32	32	7.8	23	1.9	28785	4117	45066	33.6
23	HEWLETT-PACKARD	33	95727	94	51	51	5.7	32	0.7	47061	2945	33673	17.5
24	PHILIP MORRIS	35	93547	39	3	3	5.8	18	4.6	57813	5372	59920	32.7
25	BELLSOUTH	36	89376	47	46	46	5.7	28	1.6	23123	3259	39410	20.7
26	DELL COMPUTER	37	87340	34	67	67	37.8	55	0.0	18243b	1460b	6877b	69.1
27	BELL ATLANTIC	40	84988	55	20	20	6.5	28	2.8	31566	2991	55144	23.5
28	HOME DEPOT	41	83635	57	44	44	11.7	56	0.2	30219b	1614b	13465b	20.9
29	TIME WARNER	42	81188	68	75	75	9.0	425	0.3	14582	236	31640	2.1
30	MOBIL	44	79293	102	30	30	4.5	56	2.3	46287	1704	42754	8.0
31	ELI LILLY	45	78671	71	16	16	17.7	39	1.3	9237	2096	12596	45.5
32	AMERICAN HOME PRODUCTS	46	75950	58	19	19	7.9	44	1.6	13463	2384	21079	17.7
33	DUPONT	47	73744	65	-15	-15	5.5	46	2.1	25748	1648	38536	12.0
34	AMERITECH	49	72328	66	56	56	6.6	25	1.9	17154	2504	30299	26.1
35	TYCO INTERNATIONAL	52	71329	87	58	58	8.4	35	0.1	12311	1171	16527	23.6
36	FANNIE MAE	54	69568	68	14	14	4.9	20	1.6	NA	3444	485014	24.2
37	FORD MOTOR	55	69165	57	10	10	3.0	11	3.2	144416	5939	237545	27.3
38	ABBOTT LABORATORIES	56	68703	45	22	22	12.0	29	1.5	12478	2333	13216	41.9
39	BANC ONE	57	66798	57	3	3	3.3	17	3.0	NA	3869	261496	19.0
40	SCHERING-PLOUGH	59	66346	45	8	8	16.6	36	1.1	8077	1756	7840	46.3
41	WELLS FARGO	60	66113	40	3	3	3.2	33	1.9	NA	1950	202475	9.9
42	GTE	66	61110	63	8	8	7.0	22	3.0	25473	2172	43615	31.8
43	CHASE MANHATTAN	67	61100	72	6	6	2.6	15	2.3	NA	4016	365875	17.1
44	CHEVRON	68	60455	93	16	16	3.6	34	2.6	26187	1945	36540	10.3
45	WALT DISNEY	69	59720	29	-23	-23	3.1	39	0.7	22976	1914	41378	8.0
46	AIRTOUCH COMMUNICATIONS	71	57800	101	111	111	6.9	75	0.0	5181	725	17553	9.3
47	GILLETTE	72	56466	51	-13	-13	12.7	40	1.2	10056	1428	11902	31.5
48	MORGAN STANLEY DEAN WITTER	73	55060	97	24	24	4.1	15	1.0	NA	3276	317590	26.5
49	AMERICAN EXPRESS	74	54517	121	18	18	5.6	24	0.7	NA	2201	126933	23.8
50	WARNER-LAMBERT	76	52754	62	-3	-3	14.1	38	1.3	10214	1254	9231	37.6
51	PEPSICO	78	52394	36	-13	-13	8.2	27	1.5	22348	1993	22660	30.6
52	MCDONALD'S	79	52281	39	17	17	6.8	33	0.5	12421	1550	19784	20.7
53	EMC	82	50636	100	142	142	15.2	58	0.0	3974	793	4569	26.3
54	MOTOROLA	85	49849	83	56	56	4.1	148	0.6	29398	347	28728	2.7
55	SPRINT FON GROUP	87	48491	113	75	75	5.4	33	0.9	16017	1478	19275	16.5
56	MEDIAONE GROUP	90	46210	74	99	99	4.4	33	0.0	2882	1430	28192	13.0
57	SUN MICROSYSTEMS	91	46077	60	198	198	12.8	50	0.0	9791	763	5711	25.5
58	GENERAL MOTORS (10)	93	44820	69	-4	-4	2.7	15	2.9	158514	2956	257389	18.1
59	FIRST UNION	94	44705	46	-16	-16	2.6	12	4.1	NA	3696	237363	22.7
60	TEXAS INSTRUMENTS	96	42873	109	113	113	6.5	87	0.3	8460	407	11250	7.5
61	CHARLES SCHWAB	97	42870	106	377	377	29.6	99	0.1	NA	348	22264	30.0
62	MEDTRONIC	98	41575	71	28	28	16.3	88	0.4	4134b	468b	2775	18.6c
63	FREDDIE MAC	101	40538	58	28	28	5.1	24	1.0	NA	1700	321421	21.5
64	COMPAQ COMPUTER	102	40269	24	-13	-13	3.5	35	0.3	31169	850	23051	10.2
65	BOEING	105	39347	42	-12	-12	3.2	26	1.3	56154	1120	36672	12.3
66	LIBERTY MEDIA GROUP	108	39004	66	101	101	3.5	NA	NA	1176a	-951a	20348	NA
67	XEROX	114	37157	56	9	9	7.6	24	1.4	19449	1692	30024	32.3
68	GAP	120	35844	63	74	74	22.7	44	0.2	9054b	825b	3964b	52.0
69	ORACLE	122	35717	25	58	58	12.3	28	0.0	7144	955	5819	44.3
70	TEXACO	123	35109	66	13	13	3.1	86	2.8	31707	603	28570	3.6
71	ANHEUSER-BUSCH	124	34822	73	59	59	8.3	27	1.5	11246	1233	12484	30.4
72	MINNESOTA MINING & MFG.	125	34484	86	-7	-7	5.8	29	2.6	15021	1213	14153	20.1
73	SCHLUMBERGER	126	32884	60	-23	-23	4.1	30	1.3	11816	1394	16078	13.4
74	AMGEN	127	32391	63	109	109	12.6	35	0.0	2718	863	3672	36.0
75	GOLDMAN SACHS GROUP	129	32251	68	NA	NA	4.2	26	0.7	NA	1256	231796b	NA
76	WASTE MANAGEMENT	130	32204	53	12	12	7.4	-51	0.1	12703	-767	22715	NEG
77	ALLIEDSIGNAL	132	32090	58	36	36	6.1	24	1.2	15128	1331	15560	25.7
78	KIMBERLY-CLARK	135	31256	59	18	18	9.3	25	1.8	12298	1177	11510	37.6
79	MERRILL LYNCH	140	30224	84	-6	-6	3.1	23	1.3	NA	1259	299804	13.4
80	QWEST COMMUNICATIONS (10)	146	29582	43	158	158	6.7	-25	0.0	2243	-844	8068	NEG
81	YAHOO! (10)	148	29455	148	441	441	54.9	779	0.0	203	26	622	7.1
82	ALLSTATE	149	29455	37	-22	-22	2.0	9	1.6	19307	3294	87691	22.5c
83	COLGATE-PALMOLIVE	152	29092	100	15	15	14.0	35	1.1	8972	849	7685	40.1
84	CBS	153	28821	42	32	32	3.2	NM	0.1	6805	-12	20139	NEG



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THE BUSINESS WEEK GLOBAL 1000

COUNTRY RANK		GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	
85	ELECTRONIC DATA SYSTEMS	155	28506	56	55	55	4.3	37	1.1	16891	743	11526	11.4
86	ASSOCIATES FIRST CAPITAL	157	28395	41	10	10	3.3	23	0.5	NA	1224	75175	14.6
87	COMCAST	159	28225	36	114	114	7.0	23	0.1	5145	1008	14817	30.6
88	PHARMACIA & UPJOHN	160	28093	55	25	25	5.6	40	2.0	6758	691	10312	13.9
89	UNITED TECHNOLOGIES	161	27946	62	32	32	6.4	11	1.2	25715	1255	18375	56.8
90	EMERSON ELECTRIC	162	27938	64	5	5	4.8	22	2.0	13447	1229	12660	21.9
91	DAYTON HUDSON	163	27889	63	36	36	5.5	29	0.6	30951b	962b	15666b	19.4
92	U S WEST	166	27226	54	7	7	6.2	19	4.0	12378	1436	18407	33.0c
93	BANK OF NEW YORK	167	27216	36	17	17	5.1	22	1.6	NA	1192	63503	22.9
94	ATLANTIC RICHFIELD	168	26943	84	6	6	3.6	50	3.4	10303	400	25199	7.1
95	DOW CHEMICAL	169	26695	122	25	25	3.6	22	2.9	18441	1310	23830	16.2
96	VIACOM	171	26580	39	40	40	2.2	NM	0.0	12096	-44	23613	0.1
97	LEVEL 3 COMMUNICATIONS (10)	172	26566	79	214	214	7.4	-116	0.0	392	-128	5525	NEG
98	MONSANTO	175	26064	42	-25	-25	5.2	52	0.3	8648	580	16739	10.1
99	COMPUTER ASSOCIATES INTERNATIONAL	179	25490	47	-10	-10	10.4	20	0.2	5253b	1301b	8070b	52.6c
100	AUTOMATIC DATA PROCESSING	180	25485	41	29	29	7.3	37	0.7	4798	605	5175	19.5
101	CARNIVAL	183	25140	41	21	21	5.0	28	0.9	3009	836	7179	18.0
102	ENRON	184	25056	71	42	42	3.4	40	1.4	31260	703	29350	8.6
103	J.P. MORGAN	188	24520	139	12	12	2.3	20	2.8	NA	963	261067	11.7
104	U.S. BANCORP	192	23585	33	-17	-17	4.0	17	2.4	NA	1327	76438	23.0
105	FLEET FINANCIAL GROUP	193	23458	41	0	0	2.7	15	2.6	NA	1532	104382	18.3
106	WALGREEN	195	23211	23	32	32	8.1	33	0.6	15307	488	4902	24.5
107	SAFeway	197	23045	47	28	28	7.4	27	0.0	24484	807	11390	27.7
108	TELLABS	198	22803	59	70	70	16.5	51	0.0	1660	398	1628	32.2
109	RAYTHEON	199	22717	66	25	25	2.0	19	1.2	19530	1140	27939	10.7
110	WASHINGTON MUTUAL	200	22716	38	-19	-19	2.4	14	2.5	NA	1487	165493	17.1
111	WILLIAMS	204	22164	52	60	60	5.2	273	1.2	7658	147	18647	1.9
112	MBNA	205	22149	28	31	31	8.6	26	1.0	NA	776	25806	32.6
113	DUKE ENERGY	208	21967	60	5	5	2.7	18	3.7	17610	1260	26806	15.0
114	HUGHES ELECTRONICS (10)	209	21961	55	11	11	2.6	71	1.8	5128	427	12764	3.6
115	SARA LEE	210	21889	24	-18	-18	12.2	18	2.1	20011	1102	10989	66.0
116	EASTMAN KODAK	211	21756	68	-5	-5	5.5	16	2.6	13406	1390	14733	33.9
117	SUNTRUST BANKS	213	21688	68	-15	-15	2.7	19	2.0	NA	1088	93170	13.7
118	COX COMMUNICATIONS (10)	214	21682	39	79	79	3.2	13	0.0	1717	1271	12878	24.1
119	CLEAR CHANNEL COMMUNICATIONS (10)	216	21608	66	38	38	3.9	440	0.0	1351	54	7540	0.9
120	INFINITY BROADCASTING	219	21473	26	NA	NA	2.5	73	0.0	1893	235	10798	3.4
121	EBAY (10)	220	21397	177	NA	NA	253.4	1611	0.0	47	2	92	12.9
122	HOUSEHOLD INTERNATIONAL	223	21046	43	-4	-4	3.4	19	1.4	NA	1157	52892	17.6
123	NATIONAL CITY	225	20811	66	-2	-2	3.1	16	3.1	NA	1071	88246	18.9
124	ASCEND COMMUNICATIONS	227	20637	93	115	115	9.8	772	0.0	1479	-20	2531	1.3
125	APPLIED MATERIALS	228	20514	55	72	72	6.5	177	0.0	4042	289	4930	3.7
126	INTERNATIONAL PAPER	229	20507	50	9	9	1.7	56	2.0	19500	308	26356	3.1
127	ALCOA	231	20326	55	59	59	3.4	21	0.4	15489	898	17463	16.3
128	GANNETT	233	20184	72	9	9	5.1	24	1.1	5121	816	6979	20.8
129	ALLTEL	234	20158	72	82	82	6.0	32	1.7	5194	580	9374	18.8
130	SOUTHERN CO.	236	19824	28	7	7	2.0	22	4.7	11403	977	36192	9.1
131	CATERPILLAR	242	19550	55	0	0	3.8	15	2.2	20977	1513	25128	24.5
132	GLOBAL CROSSING (10)	244	19500	47	NA	NA	25.3	-130	0.0	424	-68	2639	NEG
133	FIRST DATA	245	19409	45	35	35	5.2	28	0.2	NA	697	16587	18.4
134	CAMPBELL SOUP	246	19301	44	-19	-19	22.7	24	2.0	6696	660	5633	95.8
135	SPRINT PCS GROUP	247	19290	45	NA	NA	4.1	-10	0.0	1225	-1847	15138	NEG
136	ILLINOIS TOOL WORKS	249	19211	77	16	16	5.8	28	0.8	5648	673	6118	20.6
137	CIGNA	252	19121	93	36	36	2.3	18	1.3	16413	1292	114612	12.9
138	FIRSTAR (10)	253	19052	29	42	42	5.1	41	1.4	3345	430	38476	12.7
139	AMAZON.COM (10)	254	18913	119	708	708	136.3	-103	0.0	610	-125	648	NEG
140	BAXTER INTERNATIONAL	257	18826	65	13	13	6.5	25	1.8	6599	733	10085	26.3
141	MARSH & McLENNAN	262	18725	73	25	25	5.1	22	2.5	NA	796	11871	23.1
142	MELLON BANK	263	18685	36	6	6	4.1	20	2.2	NA	870	50777	20.3
143	LOWE'S	265	18567	52	31	31	5.8	38	0.2	12245b	482b	6345b	15.4
144	FIFTH THIRD BANCORP (10)	269	18232	68	38	38	5.6	36	1.2	2638	476	28922	15.4
145	SEARS, ROEBUCK	270	18214	48	-23	-23	3.0	14	1.9	41322	1300	37675	21.2
146	HALLIBURTON	271	18213	41	-13	-13	4.5	30	1.2	17353	731	11112	15.1
147	AMERICAN GENERAL	273	18186	72	8	8	2.1	17	2.2	3605	1052	105107	12.3
148	CVS	275	17968	46	31	31	5.8	34	0.5	15274	510	6736	16.9
149	WACHOVIA	277	17936	88	10	10	3.3	20	2.2	NA	874	64123	16.7
150	H.J. HEINZ	284	17367	48	-9	-9	7.9	23	2.8	9209	802	8023	33.8
151	PNC BANK	285	17295	57	-1	-1	2.9	15	2.9	NA	1115	77207	19.2
152	PITNEY BOWES	287	17185	64	36	36	10.5	32	1.6	4221	568	7661	32.8
153	FOX ENTERTAINMENT GROUP	288	17144	26	NA	NA	3.2	128	NA	7023	154	12630	2.5
154	NIKE	289	17138	61	32	32	5.4	47	0.8	9553	479	5397	11.5
155	CARDINAL HEALTH	300	16425	60	1	1	6.1	17	0.2	12927	283	4030	35.6
156	CONOCO	301	16424	27	NA	NA	3.8	30	2.8	23168	721	16075	12.7

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THE BUSINESS WEEK GLOBAL 1000

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157	FDX	304	16304	55	71	71	4.1	28	0.0	15873	503	9686	14.7	52
158	PRICELINE.COM (10)	306	16087	112	NA	NA	NA	NA	0.0	35	-112	67	NA	52
159	COSTCO	308	15925	73	25	25	5.3	32	0.0	24270	460	6260	16.5	54
160	LOCKHEED MARTIN	309	15909	40	-28	-28	3.0	15	2.0	26266	1001	28744	19.8c	51
161	EQUITABLE	311	15708	70	2	2	3.1	20	0.3	588	833	159501	15.6	53
162	AT HOME (10)	312	15625	127	265	265	31.6	-112	0.0	48	-144	781	NEG	52
163	KEYCORP	313	15571	35	-8	-8	2.6	15	3.0	NA	996	80020	17.4	51
164	TRAVELERS PROPERTY CASUALTY (10)	314	15479	40	-5	-5	1.7	12	1.3	10451	1343	51274	14.6	
165	COCA-COLA ENTERPRISES	316	15348	36	-3	-3	6.1	134	0.4	13414	113	21132	4.5	
166	KROGER	318	15101	59	36	36	-38.8	29	0.0	28203	538	6700	NA	
167	GUIDANT	319	15093	50	55	55	27.2	46	0.1	1897	359	1570	58.7	
168	BOSTON SCIENTIFIC	320	15035	38	19	19	18.2	49	0.0	2234	263	3893	36.8	
169	QUALCOMM	323	14650	97	289	289	14.3	87	0.0	3348	109	2567	16.5	
170	BURLINGTON NORTHERN SANTA FE	325	14566	31	-7	-7	1.9	13	1.6	8941	1123	22690	14.4	
171	MAY DEPARTMENT STORES	327	14503	43	1	1	3.9	19	2.1	13413b	849b	10533b	21.0c	
172	HARTFORD FINANCIAL SERVICES GROUP	329	14347	63	15	15	2.5	15	1.4	10323a	964a	131743a	16.6c	
173	CENDANT	331	14340	18	-15	-15	3.2	22	0.0	5284	705	20217	14.1	
174	UNION PACIFIC	335	14127	57	18	18	1.9	-116	1.4	10553	-43	29374	NEG	
175	BANKBOSTON	336	14060	47	-10	-10	2.9	18	2.7	NA	792	73513	16.0	
176	KELLOGG	337	14052	35	-16	-16	15.8	32	2.7	6762	503	5052	50.1	
177	BESTFOODS	338	13972	50	-11	-11	17.1	22	2.0	8374	640	6435	77.0	
178	SOLECTRON (10)	340	13814	55	165	165	10.7	55	0.0	5288	199	2411	19.6	
179	AFLAC	343	13627	51	60	60	3.6	30	0.6	5943	431	31183	12.2	
180	PROVIDIAN FINANCIAL (10)	344	13606	96	126	126	14.7	39	0.2	2105	296	7231	38.2	
181	TEXTRON	345	13502	89	20	20	4.6	29	1.5	9316	443	13721	16.0	
182	COLUMBIA/HCA HEALTHCARE	347	13385	24	-24	-24	2.0	24	0.3	18681	590	19429	8.2	
183	STAPLES	348	13337	29	72	72	8.0	67	0.0	7123b	184b	3179b	12.0	
184	PHILLIPS PETROLEUM	350	13195	52	5	5	3.1	194	2.6	11545	237	14216	1.6	
185	ALBERTSON'S	351	13139	54	16	16	4.7	23	1.3	16005b	567b	6234b	20.2	
186	J.C. PENNEY	354	13068	52	-28	-28	1.9	24	4.2	30678b	594b	23698b	8.0c	
187	AVON PRODUCTS	356	12948	49	21	21	45.5	31	1.5	5213	393	2434	145.5	
188	PG&E	357	12925	34	7	7	1.6	18	3.6	19942	719	33234	8.9	
189	AETNA	360	12803	91	16	16	1.2	16	0.9	14839	848	105148	7.5	
190	INTIMATE BRANDS (10)	362	12740	52	81	81	19.8	32	1.1	3886	400	1448	62.2	
191	CONAGRA	363	12724	26	-11	-11	4.3	18	2.7	23841	628	11703	23.8	
192	TEXAS UTILITIES	365	12700	45	15	15	1.6	16	5.1	14736	740	39514	9.9	
193	CORNING	366	12650	55	39	39	8.4	33	1.3	3484	354	4982	25.2	
194	OMNICOM GROUP (10)	371	12522	70	50	50	12.4	40	0.9	4092	285	6910	31.2	
195	NORFOLK SOUTHERN	375	12491	33	5	5	2.1	20	2.4	4221	630	18180	10.3	
196	WEYERHAEUSER	377	12450	62	22	22	2.7	35	2.6	10766	339	12834	7.9	
197	GENERAL MILLS	378	12284	80	18	18	65.4	24	2.7	6033	522	3861	270.0	
198	STATE STREET	379	12267	76	11	11	5.3	27	0.7	NA	436	47082	19.5	
199	HONEYWELL	384	11952	95	13	13	4.3	20	1.2	8427	572	7170	21.0	
200	CABLEVISION SYSTEMS (10)	385	11949	79	185	185	-4.6	-18	0.0	3265	-449	7061	NM	
201	CLOROX	391	11824	101	21	21	9.6	31	1.4	2741	298	3030	31.0	
202	BMC SOFTWARE	396	11658	49	7	7	8.1	31	0.0	1304b	389b	2283b	25.7	
203	COMPUWARE (10)	404	11493	31	35	35	10.6	33	0.0	1139	194	1073	32.6	
204	NEWELL RUBBERMAID	409	11412	41	-16	-16	3.5	25	2.0	3720	396	4328	13.5	
205	FEDERATED DEPARTMENT STORES	411	11367	55	5	5	2.0	16	0.0	15833b	685b	13464b	12.6	
206	CHUBB	412	11305	70	-12	-12	2.0	16	1.8	5304	707	20746	12.3	
207	BB&T (10)	415	11216	37	10	10	3.8	20	1.9	2942	502	34427	18.7	
208	GENENTECH	416	11205	88	27	27	4.8	71	0.0	1151	182	2855	6.7	
209	CONSOLIDATED EDISON	418	11178	49	13	13	1.9	16	4.4	6956	730	14381	11.7	
210	LIMITED	419	11152	49	50	50	6.5	37	1.2	9347b	2054b	4550b	17.7	
211	DELPHI AUTOMOTIVE SYSTEMS	423	11088	20	NA	NA	3.5	12	NA	28	889	19	29.0	
212	NABISCO HOLDINGS (10)	424	11068	42	-10	-10	2.8	-123	1.8	8400	-71	11117	NEG	
213	AON	427	11016	43	1	1	3.6	20	1.7	5903	538	19688	18.1	
214	FRANKLIN RESOURCES (10)	429	10968	44	-11	-11	4.5	27	0.5	2642	500	3480	16.9	
215	NEXTEL COMMUNICATIONS	430	10913	37	57	57	-174.8	-6	0.0	1847	-1519	11573	NA	
216	UNITED HEALTHCARE	431	10860	58	-9	-9	2.8	21	0.1	17355	509	9701	13.0	
217	ESTEE LAUDER (10)	434	10816	46	43	43	12.2	45	0.4	3618	237	2513	27.3	
218	KOHL'S (10)	435	10801	68	43	43	7.4	53	0.0	3682	192	1936	14.0	
219	SOUTHWEST AIRLINES	437	10722	32	80	80	4.4	23	0.1	4164	433	4716	19.1	
220	INTERPUBLIC GROUP	440	10604	76	28	28	8.4	32	0.8	3844	310	6943	25.8	
221	IMMUNEX (10)	441	10599	130	321	321	39.8	1041	0.0	243	1	325	3.8	
222	PPG INDUSTRIES	442	10542	61	-17	-17	3.7	15	2.5	7510	801	7387	25.4	
223	ROCKWELL INTERNATIONAL	445	10508	55	23	23	3.2	23	1.9	6752	462	7170	14.3	
224	INGERSOLL-RAND	446	10501	64	41	41	4.0	20	0.9	8292	509	8310	20.3	
225	FPL GROUP	448	10483	58	-5	-5	2.1	13	3.6	6661	664	12029	15.7	
226	E*TRADE GROUP (10)	452	10320	45	723	723	10.6	-593	0.0	284	-1	1969	NEG	
227	LINCOLN NATIONAL	453	10302	102	13	13	1.9	19	2.2	1621	510	93836	9.9	
228	COMPUTER SCIENCES	454	10273	65	25	25	5.1	30	0.0	7660b	341b	4047	16.9c	
229	UNITED MICROSYSTEMS	455	10250	65	25	25	5.1	30	0.0	7660b	341b	4047	16.9c	

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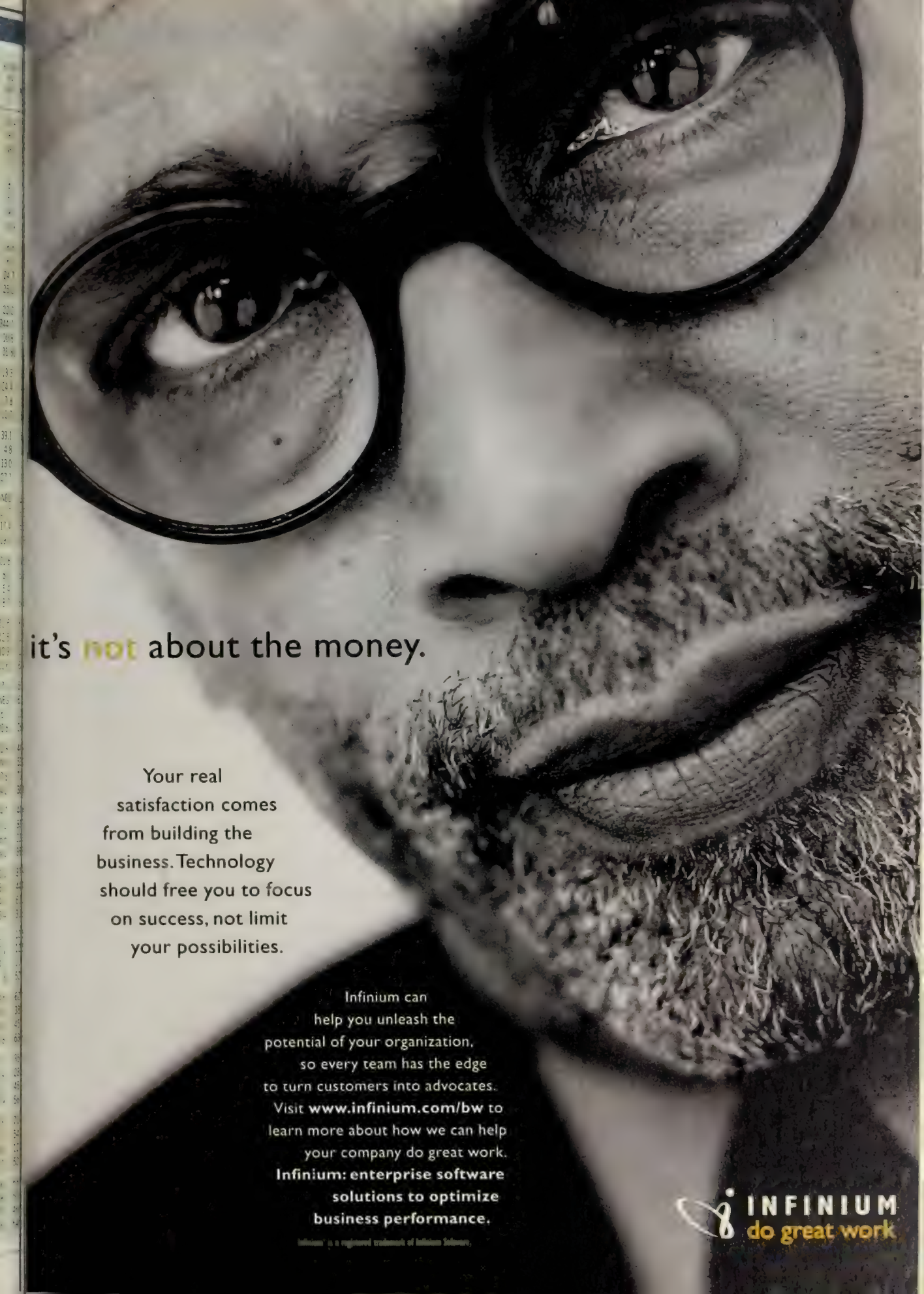


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THE BUSINESS WEEK GLOBAL 1000

COUNTRY RANK		GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	
229	McGraw-Hill	455	10250	52	33	33	15.6	29	1.7	3729	342	3788	22.4
230	PROGRESSIVE (10)	457	10219	140	2	2	3.8	23	0.2	5292	457	8463	16.5
231	BAKER HUGHES	458	10211	31	-13	-13	3.2	-27	1.5	6312	-297	7811	NEG
232	CSX	460	10187	47	-2	-2	1.7	15	2.6	9898	590	20427	11.7
233	PECO ENERGY	461	10149	49	73	73	3.6	20	2.0	5210	532	12048	18.3
234	WM. WRIGLEY JR. (10)	464	10107	87	-10	-10	8.6	34	1.0	2005	305	1521	25.5
235	NORTHERN TRUST (10)	465	10090	90	28	28	5.3	28	1.1	2319	354	27870	19.0
236	RJR NABISCO HOLDINGS	466	10086	31	10	10	1.3	19	6.6	17037	724	28892	6.9
237	MATTEL	470	10020	26	-30	-30	4.4	26	1.2	4782	332	4262	16.5
238	AMR	471	9994	65	-15	-15	1.6	10	0.0	19205	1306	22303	16.1
239	AES (10)	474	9938	50	4	4	9.5	39	0.0	2398	307	10781	24.7
240	SYSCO	476	9914	30	27	27	7.3	29	1.4	15328	325	3780	25.2
241	CAPITAL ONE FINANCIAL (10)	477	9909	50	51	51	7.5	34	0.2	2600	275	9419	22.2
242	UNISYS	480	9888	38	54	54	99.8	29	0.0	7208	387	5578	344.7
243	CONSECO (10)	481	9886	31	-34	-34	1.9	17	1.8	7716	510	43600	10.8
244	MARRIOTT INTERNATIONAL	482	9811	38	10	10	3.7	24	0.6	7968	390	6233	15.8c
245	3COM	483	9799	27	8	8	3.5	26	0.0	5420	246	4081	13.3
246	BECTON, DICKINSON	484	9692	39	10	10	6.2	25	0.9	3117	360	3846	24.4
247	MASCO	485	9689	29	2	2	3.6	20	1.5	4345	476	5167	17.8
248	CMGI (10)	487	9671	104	834	834	14.3	133	0.0	91	17	237	10.7
249	TJX	489	9651	30	28	28	7.9	20	0.5	7949b	433b	2748b	39.1
250	UNOCAL	492	9600	40	12	12	4.2	86	2.0	5479	166	7952	4.8
251	EDISON INTERNATIONAL	493	9548	28	-6	-6	1.9	15	3.9	10208	668	24698	13.0
252	GATEWAY 2000	494	9515	61	35	35	7.1	26	0.0	7468	346	2890	27.7
253	MICRON TECHNOLOGY	495	9484	38	61	61	2.8	-39	0.0	3012	-234	4688	NEG
254	COMERICA	498	9443	60	-8	-8	3.4	16	2.4	NA	607	36601	21.7
255	TRIBUNE	500	9394	79	18	18	4.6	26	0.9	2981	351	5936	17.4
256	GOODYEAR TIRE & RUBBER	506	9310	60	-17	-17	2.5	13	2.0	12600	717	10589	19.1
257	BEST BUY (10)	508	9265	46	180	180	8.7	40	0.0	10078	224	2512	21.6
258	McKESON HBOC	510	9244	34	-56	-56	3.2	40	0.7	NA	NA	NA	8.0
259	USX-MARATHON GROUP	511	9240	30	-14	-14	2.1	39	2.8	21726	310	14544	5.4
260	AMERICAN STORES	513	9221	33	34	34	3.4	39	1.1	19867b	234b	8885b	8.7
261	MERCANTILE BANCORPORATION	514	9211	58	14	14	3.0	24	2.3	NA	375	35800	12.5
262	PUBLIC SERVICE ENTERPRISE GROUP	515	9208	42	27	27	1.9	15	5.2	5931	644	17997	12.5
263	UNICOM	517	9189	42	23	23	1.8	17	3.8	7151	510	25707	10.9
264	TRANSAMERICA	519	9144	73	28	28	1.6	13	1.4	NA	707	58503	12.6
265	FRONTIER (10)	521	9081	53	73	73	8.6	49	0.4	2594	178	3059	17.5
266	BANKERS TRUST †	524	9042	93	-25	-25	2.1	-82	4.3	NA	-73	133115	NEG
267	RELIANT ENERGY	525	9038	31	7	7	2.1	14	4.9	4350	622	19139	15.1
268	PIONEER HI-BRED INTERNATIONAL	529	8980	38	-1	-1	7.2	35	1.1	1835	270	1717	20.8
269	QUAKER OATS	530	8947	66	15	15	74.2	28	1.7	4843	285	2510	262.9
270	TRICON GLOBAL RESTAURANTS (10)	531	8912	58	88	88	-8.9	18	0.0	8468	445	4531	NM
271	LOEWS	532	8883	81	-10	-10	0.9	11	1.2	20713	811	70906	7.8
272	DEERE	534	8849	38	-26	-26	2.2	9	2.3	11926	1021	18002	24.2
273	ARCHER DANIELS MIDLAND	535	8822	15	-17	-17	1.4	29	1.3	16109	404	13834	4.7
274	LEXMARK INTERNATIONAL GROUP (10)	539	8745	136	145	145	17.6	34	0.0	3021	243	1483	51.2
275	AIR PRODUCTS & CHEMICALS	544	8645	41	-6	-6	3.3	20	1.7	4919	489	7490	16.6
276	BROADCOM (10)	547	8624	96	275	275	41.0	169	0.0	203	36	237	24.2
277	DANA	548	8569	52	-1	-1	2.9	14	2.4	12464	591	10138	21.0
278	RALSTON PURINA GROUP	550	8523	27	-27	-27	7.2	21	1.5	4653	391	5552	33.7
279	REGIONS FINANCIAL (10)	552	8481	38	-8	-8	2.7	19	2.6	2998	422	36832	14.3
280	GENERAL DYNAMICS	554	8377	66	48	48	3.8	23	1.5	4970	364	4572	16.4
281	AMERICAN ELECTRIC POWER	556	8321	43	-4	-4	1.7	15	5.5	6346	536	19483	11.1
282	DOMINION RESOURCES	558	8290	43	9	9	1.6	16	6.0	6086	536	17517	10.1
283	COASTAL	559	8260	39	10	10	2.4	17	0.6	7368	444	12304	14.1
284	IMS HEALTH	560	8237	25	0	0	9.2	43	0.3	1187	179	1556	21.3c
285	DONALDSON, LUFKIN & JENRETTE (10)	561	8221	67	52	52	3.2	24	0.4	8452	371	72282	13.5
286	DANAHER (10)	563	8184	60	67	67	5.9	42	0.1	2910	183	2739	14.0
287	BIOGEN	564	8179	109	148	148	11.2	52	0.0	558	139	925	21.6
288	ST. PAUL	567	8155	36	-20	-20	1.3	22	2.9	6693	397	38323	5.8
289	LINEAR TECHNOLOGY (10)	570	8111	53	52	52	9.7	43	0.3	485	181	893	22.7
290	GEORGIA-PACIFIC GROUP	572	8093	86	35	35	2.5	39	1.2	13223	111	11538	6.4
291	FORT JAMES	573	8085	37	-24	-24	7.7	16	1.6	7301	500	7792	48.5
292	DELTA AIR LINES	576	8052	57	0	0	2.2	8	0.2	14138	1001	14603	27.9
293	DOVER	577	8042	38	1	1	4.4	26	1.1	3978	326	3627	16.8
294	TANDY	580	7996	83	86	86	10.7	32	0.5	4788	245	1994	33.7
295	ENTERGY	581	7996	32	23	23	1.1	11	3.7	11495	739	22848	10.6
296	SABRE GROUP HOLDINGS (10)	582	7993	62	76	76	8.4	31	0.0	2298	232	1927	26.7
297	CNA FINANCIAL	586	7988	43	-14	-14	0.9	34	0.0	13375	282	62359	2.6
298	NOVELL	590	7933	24	124	124	5.3	60	0.0	1084	102	1924	8.8
299	HARLEY-DAVIDSON	593	7822	51	43	43	7.6	34	0.4	2064	214	1920	22.3
300	OFFICE DEPOT	595	7796	21	6	6	3.9	31	0.0	8998	233	4113	12.5

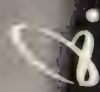


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THE BUSINESS WEEK GLOBAL 1000

COUNTRY RANK		GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/ BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	
301	PRAXAIR	597	7774	49	0	0	3.3	18	1.1	4833	425	8096	18.3
302	AUTONATION	607	7652	16	-34	-34	1.4	21	0.0	16118	335	13926	6.5
303	METROMEDIA FIBER NETWORK (10)	608	7648	40	690	690	51.3	NM	0.0	36	1	974	0.0
304	BURLINGTON RESOURCES	609	7615	43	2	2	2.5	268	1.3	1637	86	5917	0.9
305	TENET HEALTHCARE	610	7608	25	-30	-30	2.1	21	0.0	9895	378	12833	10.1
306	KMART	611	7585	15	-21	-21	1.3	14	0.0	33674b	531b	14166b	8.9
307	HERSHEY FOODS	612	7580	54	-22	-22	7.5	16	1.8	4436	341	3404	47.1
308	FIRSTENERGY	617	7465	32	7	7	1.7	17	4.7	5056	411	18064	9.9
309	UNUM	618	7447	54	-3	-3	2.7	20	1.1	3959	363	15183	13.7
310	OCCIDENTAL PETROLEUM	624	7347	21	-24	-24	2.4	66	4.7	6596	325	15252	3.6
311	MARSHALL & ILSLEY (10)	625	7306	70	30	30	3.4	24	1.4	1675	301	21566	13.8
312	PAYCHEX (10)	626	7286	30	23	23	17.7	56	0.8	993	102	1550	31.5
313	EQUITY OFFICE PROPERTIES	627	7285	28	3	3	1.1	21	5.2	1680	349	14261	5.3
314	HUNTINGTON BANCSHARES (10)	628	7277	35	16	16	3.4	24	2.3	2324	302	28296	14.4
315	REPUBLIC NEW YORK	630	7263	68	6	6	2.7	33	1.5	NA	248	50424	8.3
316	CHANCELLOR MEDIA (10)	633	7258	51	22	22	3.7	-66	0.0	1274	-49	7228	NEG
317	CIRCUIT CITY STORES	635	7214	72	69	69	4.0	48	0.2	9338b	148b	3135b	8.3
318	JEFFERSON-PILOT	638	7173	68	18	18	2.4	17	2.0	1049	444	24338	14.2
319	MAXIM INTEGRATED PRODUCTS (10)	640	7161	53	60	60	8.9	37	0.0	560	178	769	24.4
320	SUMMIT BANCORPORATION (10)	645	7070	41	-18	-18	2.6	15	2.9	2401	466	33101	17.2
321	ALTERA (10)	654	6902	35	107	107	7.4	40	0.0	654	154	1093	18.4
322	GENERAL INSTRUMENT	656	6854	39	62	62	4.0	27	0.0	1988	135	2188	14.4
323	PAINEWEBBER GROUP	657	6852	47	9	9	2.8	15	0.9	NA	434	54176	18.7
324	FORTUNE BRANDS	658	6829	41	6	6	1.7	27	2.2	5241	263	7360	6.4
325	UNION CARBIDE	659	6824	51	3	3	2.8	21	1.8	5659	403	7291	13.4
326	MBIA	660	6814	68	-8	-8	1.8	17	1.2	425	482	11797	10.3
327	CINCINNATI FINANCIAL (10)	661	6801	41	-2	-2	1.3	31	1.7	2054	242	11087	4.0
328	XL CAPITAL	662	6783	61	-19	-19	1.4	10	2.9	685	588	10109	14.4
329	SLM HOLDING	663	6762	42	4	4	10.4	14	1.5	NA	501	37210	72.4
330	STARBUCKS (10)	665	6732	37	54	54	7.6	84	0.0	1309	68	993	9.0
331	ROHM & HAAS	666	6727	40	10	10	4.5	15	1.8	3720	453	3648	29.4
332	SEAGATE TECHNOLOGY	667	6723	30	30	30	2.5	-232	0.0	6819	-530	5645	NEG
333	CINTAS (10)	668	6713	64	39	39	8.7	46	0.3	1198	123	1018	18.8
334	HARTFORD LIFE (10)	676	6644	48	-8	-8	2.6	16	0.8	4699	306	100980	16.2
335	CAROLINA POWER & LIGHT	679	6621	44	7	7	2.2	16	4.6	3130	399	8347	14.3
336	ADC TELECOMMUNICATIONS (10)	680	6615	49	74	74	6.7	56	0.0	1380	147	1301	12.0
337	ROYAL CARIBBEAN CRUISES (10)	682	6596	39	12	12	2.8	20	0.9	2636	331	5686	14.1
338	SOUTHRUST (10)	686	6515	39	-4	-4	2.3	17	2.3	2859	369	38134	14.0
339	BROWNING-FERRIS INDUSTRIES	688	6510	42	17	17	4.8	20	1.8	4746	349	4999	23.3
340	LEHMAN BROTHERS HOLDINGS	689	6489	55	-23	-23	1.6	10	0.7	NA	736	153890	16.0c
341	RITE AID	690	6469	25	-30	-30	2.2	20	1.8	12732b	335b	7655	11.3c
342	XILINX (10)	695	6424	44	134	134	7.3	50	0.0	614	127	941	14.5
343	USA NETWORKS (10)	698	6406	40	63	63	2.5	121	0.0	2634	77	8327	2.0
344	DTE ENERGY	702	6346	44	11	11	1.7	15	4.7	4221	443	12088	11.7
345	MAYTAG	704	6286	71	40	40	12.4	21	1.0	4069	287	2588	58.5
346	EATON	707	6254	87	-3	-3	3.0	19	2.0	6625	349	5665	16.1
347	KANSAS CITY SOUTHERN (10)	708	6206	56	33	33	6.3	29	0.3	1284	190	2620	21.8
348	ALLERGAN (10)	710	6191	93	121	121	8.9	92	0.6	1296	-90	1334	9.7
349	ANALOG DEVICES	711	6185	38	56	56	5.5	57	0.0	1231	119	1862	9.5
350	GLOBAL TELESYSTEMS GROUP (10)	716	6136	76	98	98	17.5	-16	0.0	372	-243	2615	NEG
351	TV GUIDE (10)	720	6101	40	106	106	14.4	54	0.0	598	65	404	26.7
352	UNIONBANCAL (10)	721	6084	37	14	14	2.2	13	2.1	2506	466	32276	16.3
353	GENUINE PARTS	723	6048	34	-1	-1	2.9	17	3.1	6614	356	3600	17.6
354	GEMSTAR INTERNATIONAL GROUP (10)	725	6037	62	184	184	41.8	81	0.0	127	39	186	51.4
355	NEW YORK TIMES	728	6023	34	-3	-3	4.1	22	1.2	2937	287	3465	18.0
356	APPLE COMPUTER	729	6021	44	65	65	4.0	13	0.0	5941	309	4289	30.4
357	TRW	730	6011	50	-7	-7	3.2	15	2.6	11887	477	7169	21.5
358	SAFECO	733	5990	44	-6	-6	1.1	17	3.2	4562	352	30892	6.2
359	AVERY DENNISON	735	5942	60	16	16	7.2	27	1.6	3460	223	2143	26.4
360	KNIGHT/TRIMARK GROUP (10)	737	5937	56	NA	NA	29.7	61	0.0	356	67	359	48.5
361	HERTZ (10)	738	5929	55	20	20	4.2	20	0.4	4238	277	8873	20.4
362	ACE (10)	741	5907	31	-14	-14	1.5	11	1.2	1407	560	8789	14.1
363	DOLLAR GENERAL (10)	742	5894	27	9	9	7.5	33	0.5	3221	182	1212	22.9
364	UNION PLANTERS (10)	743	5890	41	-29	-29	2.0	24	4.8	2694	226	31692	8.3
365	STARWOOD HOTELS & RESORTS WORLDWIDE	749	5792	33	-31	-31	1.4	-9	1.8	4857	208	16101	NEG
366	STRYKER (10)	750	5760	60	46	46	9.6	-350	0.2	1103	40	2886	NEG
367	DUN & BRADSTREET	752	5742	35	13	13	-15.6	23	2.1	1935	246	1789	NA
368	EQUITY RESIDENTIAL PROPERTIES	754	5732	48	-2	-2	1.5	26	5.9	NA	258	10700	5.5
369	TOYS 'R' US	755	5732	23	-13	-13	1.5	16	0.0	11170b	376b	7899b	9.2c
370	NTL (10)	760	5690	94	132	132	16.0	-7	0.0	747	-504	6194	NEG
371	CONSOLIDATED NATURAL GAS	761	5670	59	5	5	2.4	22	3.3	2760	288	6362	10.8
372	HASBRO	766	5632	29	13	13	2.9	27	0.8	3304	206	3794	10.8

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THE BUSINESS WEEK GLOBAL 1000

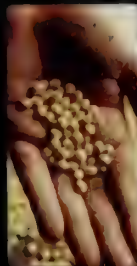
COUNTRY RANK		GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/ BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	IND.
373	WASHINGTON POST	768	5621	557	3	3	3.6	22	0.9	2110	223	2730	16.5
374	AMEREN	769	5617	41	5	5	1.8	14	6.2	3318	387	8847	13.2
375	GPU	772	5567	44	13	13	1.6	12	4.9	4249	426	16288	13.9
376	PE CORP.	773	5562	112	79	79	9.8	36	0.6	1531	127	1334	27.4
377	HEALTHSOUTH	776	5553	13	-53	-53	1.7	12	0.0	4006	474	6773	13.7
378	NATIONWIDE FINANCIAL SERVICES (10)	778	5550	43	-1	-1	2.3	17	0.7	2512	332	74671	13.6
379	WELLPOINT HEALTH (10)	782	5533	82	27	27	4.1	17	0.0	6478	320	4226	23.5
380	VF	785	5516	46	-14	-14	2.7	14	1.8	5479	388	3837	18.7
381	ECOLAB (10)	788	5506	43	38	38	8.0	35	1.0	1888	155	1471	22.9
382	CENTRAL & SOUTH WEST	792	5475	26	-3	-3	1.5	13	6.8	5482	440	13744	11.7
383	SYNOVUS FINANCIAL (10)	796	5453	20	-10	-10	5.0	28	1.8	1235	187	10498	18.0
384	CINERGY	799	5425	34	6	6	2.1	19	5.3	5808	261	10299	11.1
385	AMERADA HESS	800	5416	60	11	11	2.1	-52	1.0	6590	-196	7883	NEG
386	PACIFICORP	802	5408	18	-21	-21	1.4	13	5.9	5581	300	12989	10.3
387	UNIVISION COMMUNICATIONS (10)	805	5387	59	71	71	13.1	297	0.0	577	10	938	4.4
388	UST	807	5371	31	15	15	11.9	12	5.5	1423	455	913	95.3
389	GOLDEN WEST FINANCIAL	808	5361	95	-12	-12	1.8	12	0.6	NA	447	38469	15.4
390	VASTAR RESOURCES (10)	809	5358	55	23	23	8.5	50	0.5	1602	136	2574	17.2
391	JOHNSON CONTROLS	810	5353	63	6	6	3.1	14	1.6	12587	338	7942	22.2
392	FIRST TENNESSEE NATL. (10)	811	5351	41	30	30	4.6	23	1.8	1925	226	18734	20.3
393	SERVICEMASTER (10)	812	5346	18	-19	-19	5.6	27	2.0	4724	190	2915	20.9
394	CENTURYTEL (10)	814	5336	38	30	30	3.4	23	0.5	1577	229	4935	14.8
395	WINN-DIXIE STORES	815	5323	36	-12	-12	3.9	31	2.9	13617	210	3069	12.5
396	UNIPHASE (10)	816	5318	134	163	163	16.1	-64	0.0	176	-81	269	NEG
397	TYSON FOODS (10)	817	5297	23	9	9	2.6	70	0.4	7414	25	5243	3.7
398	PROVIDENT (10)	818	5297	39	6	6	1.6	21	1.0	3938	254	23088	8.0
399	FOOD LION (10)	819	5296	11	14	14	3.2	19	1.5	10219	273	3676	17.0
400	LSI LOGIC	822	5257	37	74	74	3.3	55	0.0	1491	120	2800	6.0c
401	MGIC INVESTMENT (10)	823	5247	48	-20	-20	3.0	14	0.4	975	385	3051	22.4
402	SHERWIN-WILLIAMS	824	5241	31	-7	-7	3.1	19	1.6	4934	273	4065	16.1
403	SERVICE CORP. INTERNATIONAL	825	5235	19	-53	-53	1.6	14	1.9	2875	342	13266	11.0
404	AMERITRADE HOLDING (10)	826	5215	90	1142	1142	25.5	223	0.0	158	0	1290	11.5
405	SEALED AIR	828	5187	62	16	16	11.8	239	0.0	2720	81	4040	5.0
406	LEGGETT & PLATT (10)	829	5181	26	5	5	3.5	20	1.4	3370	248	2535	17.1
407	ECHOSTAR COMMUNICATIONS (10)	830	5178	115	351	351	-10.3	-15	0.0	983	-261	1807	NM
408	SEMPRA ENERGY	831	5160	22	-15	-15	1.8	17	7.3	5525	294	10456	10.6
409	NORDSTROM	836	5044	36	-1	-1	3.8	25	0.9	5028b	207b	3115b	15.2
410	CMS ENERGY	837	5039	47	7	7	2.4	17	2.8	5141	242	11310	13.7
411	ZIONS BANCORPORATION (10)	838	5030	64	25	25	4.7	31	0.9	1098	147	16649	15.2
412	AMSOUTH BANCORPORATION (10)	841	5009	28	11	11	3.3	19	2.4	1649	263	19902	17.5
413	INKTOMI (10)	842	4994	103	NA	NA	38.9	-193	0.0	20	-22	71	NEG
414	EQUIFAX (10)	843	4986	36	-1	-1	22.5	26	1.0	1621	193	1829	86.2
415	INTUIT (10)	845	4973	81	72	72	3.2	70	0.0	593	-12	1499	4.6
416	W.W. GRAINGER	847	4962	53	1	1	3.9	21	1.2	4341	239	2104	18.3
417	BLACK & DECKER	849	4953	57	-2	-2	8.7	20	0.8	4560	246	3853	42.4
418	BEAR STEARNS	851	4942	44	-14	-14	1.6	12	1.4	NA	660	154496	13.4
419	CHAMPION INTERNATIONAL	855	4899	51	7	7	1.6	42	0.4	5653	94	8840	3.8
420	WHIRLPOOL	859	4857	65	-6	-6	2.5	18	2.1	10323	310	7935	13.5
421	PANAMSAT (10)	860	4850	33	-41	-41	1.8	41	0.0	767	125	5890	4.4
422	SIMON PROPERTY GROUP	861	4849	29	-12	-12	1.8	29	6.9	NA	167	13269	6.2
423	HEALTHCON (10)	862	4847	89	NA	NA	NA	-57	0.0	49	-53	80	NEG
424	R.R. DONNELLEY & SONS	864	4836	36	-19	-19	3.7	18	2.3	5018	274	3788	20.5
425	BED BATH & BEYOND (10)	870	4766	34	36	36	11.6	49	0.0	1397	97	633	23.7
426	FIRST AMERICAN (10)	871	4762	41	-12	-12	2.6	22	2.7	1746	211	20732	12.0
427	PP&L RESOURCES	872	4760	30	36	36	2.5	12	3.3	3786	341	9607	20.4
428	REALNETWORKS (10)	873	4759	71	513	513	57.0	NM	0.0	65	-16	128	NEG
429	DOW JONES	874	4756	53	9	9	9.5	15	1.8	2158	185	1491	63.6
430	CERIDIAN	875	4755	33	22	22	7.3	33	0.0	1162	140	1290	22.3
431	OWENS-ILLINOIS	876	4747	31	-32	-32	2.4	55	0.0	5306	122	11061	4.3
432	MOLEX (10)	877	4746	31	10	10	3.4	28	0.2	1623	182	1640	12.3
433	PARKER HANNIFIN	878	4741	44	6	6	2.9	15	1.6	4633	335	3525	19.1
434	CHARTER ONE FINANCIAL (10)	879	4728	28	-13	-13	2.4	15	2.3	1935	277	24467	16.3
435	WILLAMETTE INDUSTRIES	881	4718	42	24	24	2.3	48	1.7	3700	89	4698	4.8
436	GALILEO INTL. (10)	882	4716	45	14	14	5.2	22	0.8	1481	196	1291	23.2
437	MORTON INTERNATIONAL †	883	4710	39	28	28	3.3	24	1.3	2530	209	2548	13.5
438	CIT GROUP (10)	884	4698	29	-8	-8	1.7	13	1.4	2271	339	24303	12.6
439	H&R BLOCK	886	4683	48	10	10	3.8	27	2.1	1307	174	2904	14.2
440	COOPER INDUSTRIES	888	4676	50	-23	-23	3.0	18	2.7	3651	283	3779	16.6
441	CONSTELLATION ENERGY GROUP	890	4664	31	2	2	1.6	14	5.4	3358	349	9195	11.3
442	NORTHROP GRUMMAN	892	4656	68	-37	-37	1.6	14	2.4	8902	194	9536	11.6
443	NEW CENTURY ENERGIES	895	4648	40	-12	-12	1.8	13	5.7	3611	342	7672	13.8
444	COMVERSE TECHNOLOGY (10)	897	4644	68	103	103	10.9	37	0.0	696	112	1031	29.3

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COUNTRY RANK		GLOBAL 1000 RANK	MARKET VALUE U.S. \$ MIL.	PRICE PER SHARE U.S. \$	% CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL.	PROFITS U.S. \$ MIL.	ASSETS U.S. \$ MIL.	RETURN ON EQUITY %	
445	T. ROWE PRICE (10)	898	4642	39	9	9	7.0	25	1.0	886	174	797	28.3
446	OLD KENT FINANCIAL (10)	900	4638	45	18	18	4.2	22	1.8	1475	199	16589	18.8
447	SMURFIT-STONE CONTAINER (10)	901	4635	22	17	17	2.8	-10	0.0	3469	-194	11631	NEG
448	COUNTRYWIDE CREDIT	902	4629	41	-11	-11	2.2	12	1.0	NA	385b	15648b	18.1c
449	FISERV (10)	903	4626	38	43	43	4.9	39	0.0	1234	114	3958	12.7
450	BROWN-FORMAN (10)	910	4568	67	16	16	5.2	23	1.8	1669	185	1494	23.0
451	VULCAN MATERIALS	912	4558	45	19	19	4.0	19	1.7	1776	256	1659	21.4
452	QUINTILES TRANSNATIONAL (10)	914	4548	41	-16	-16	5.4	45	0.0	1188	84	1015	12.0
453	ANADARKO PETROLEUM	915	4537	38	14	14	3.6	-129	0.5	560	3	3633	NEG
454	ADOBE SYSTEMS	917	4522	74	86	86	8.7	36	0.3	895	119	767	24.1
455	TORCHMARK	921	4495	33	-10	-10	2.0	18	1.1	1754	256	11249	11.4
456	TERADYNE (10)	922	4488	53	72	72	4.2	63	0.0	1489	102	1313	6.7
457	BIOMET (10)	923	4486	40	38	38	5.8	32	0.3	651	125	849	18.2
458	COLUMBIA ENERGY GROUP	926	4468	54	-5	-5	2.2	16	1.7	6568	269	6969	13.6
459	OUTDOOR SYSTEMS (10)	929	4435	30	50	50	5.8	125	0.0	706	41	2757	4.6
460	GULFSTREAM AEROSPACE (10)	930	4434	62	45	45	20.6	19	0.0	2428	225	1614	111.1
461	PACCAR (10)	934	4398	56	2	2	2.4	10	1.4	7895	417	6795	23.6
462	INTERNATIONAL FLAVORS & FRAGRANCES	938	4361	41	-14	-14	4.6	23	3.7	1407	204	1388	20.0
463	NUCOR	939	4358	50	-3	-3	2.1	19	1.0	4151	264	3227	10.9
464	BAUSCH & LOMB	940	4357	76	53	53	5.1	34	1.4	2363	109	3492	15.1
465	SANMINA (10)	941	4357	75	93	93	8.3	53	0.0	992	86	658	15.7
466	CONCORD EFS (10)	943	4347	34	59	59	12.0	68	0.0	376	64	520	17.7
467	LYCOS (10)	944	4341	101	279	279	14.0	-114	0.0	56	-97	249	NEG
468	AUTOZONE	945	4341	29	-13	-13	3.4	19	0.0	3343	228	2748	18.0
469	EL PASO ENERGY (10)	946	4338	36	-7	-7	2.1	18	2.2	5782	250	10069	11.8
470	ABERCROMBIE & FITCH (10)	947	4325	84	99	99	22.2	40	0.0	816	102	319	55.5
471	CITRIX SYSTEMS (10)	948	4314	49	89	89	12.6	57	0.0	249	61	431	22.3
472	ALLEGHENY ENERGY	956	4270	35	24	24	2.1	13	4.9	2576	287	6748	16.3
473	TIMES MIRROR	959	4239	59	-8	-8	7.0	21	1.4	3009	253	4218	34.1
474	U.S. CELLULAR (10)	961	4220	48	57	57	2.1	36	0.0	877	112	2509	5.7
475	VERITAS SOFTWARE (10)	964	4203	88	119	119	24.7	75	0.0	211	52	349	33.1
476	VITESSE SEMICONDUCTOR (10)	967	4176	55	114	114	10.2	65	0.0	175	53	368	15.7
477	NEXLINK COMMUNICATIONS (10)	970	4167	77	145	145	-16.9	-11	0.0	140	-278	2483	NM
478	KNIGHT-RIDDER	973	4153	53	-7	-7	2.5	14	1.5	3092	306	4257	18.3
479	INGRAM MICRO (10)	976	4133	29	-34	-34	2.7	18	0.0	22034	245	6733	15.3
480	POPULAR (10)	977	4131	30	-12	-12	2.6	18	1.8	1872	232	23160	14.5
481	SIEBEL SYSTEMS (10)	978	4129	46	100	100	12.5	75	0.0	392	43	442	16.7
482	TELEPHONE & DATA SYSTEMS (10)	979	4125	67	54	54	1.8	NM	0.7	1806	64	5528	NEG
483	REPUBLIC SERVICES (10)	980	4122	24	NA	NA	3.1	23	0.0	1369	154	2812	13.6
484	FLORIDA PROGRESS (10)	982	4104	42	2	2	2.2	14	5.2	3620	283	6161	15.9
485	M&T BANK (10)	985	4076	527	4	4	2.4	18	0.8	1460	208	20584	13.3
486	AMBAC FINANCIAL GROUP (10)	986	4072	58	7	7	1.9	16	0.7	452	254	11212	12.5
487	MONTANA POWER (10)	987	4069	74	104	104	3.7	25	2.2	1254	166	2928	14.6
488	LORAL SPACE & COMMUNICATIONS (10)	989	4051	17	-34	-34	1.8	-22	0.0	1302	-139	5229	NEG
489	SUNGARD DATA SYSTEMS (10)	991	4036	35	3	3	4.3	63	0.0	1160	119	1075	6.9
490	KLA-TENCOR (10)	993	4011	46	35	35	3.3	239	0.0	1166	134	1548	1.4
491	CENTURY COMMUNICATIONS (10)	994	4005	53	234	234	-8.7	-61	0.0	485	-83	1515	NM
492	NORTHERN STATES	995	4003	26	-8	-8	1.6	14	5.5	2819	282	7396	11.1
493	FORE SYSTEMS (10) †	996	3994	34	56	56	7.2	-18	0.0	458	35	621	NEG
494	MCLEODUSA (10)	999	3983	54	29	29	7.4	-24	0.0	604	-125	1925	NEG

KEY TO INDUSTRY CODES Left-hand digit represents broad economic sector as defined by Morgan Stanley Capital International. Right-hand digit is industry classification code within each economic sector.

1. ENERGY

- 11. Energy sources
- 12. Utilities—electrical & gas

2. MATERIALS

- 21. Building materials & components
- 22. Chemicals
- 23. Forest products & paper
- 24. Metals—nonferrous
- 25. Metals—steel
- 26. Misc. materials & commodities

3. CAPITAL EQUIPMENT

- 31. Aerospace & military technology

32. Construction & housing

- 33. Data processing & reproduction
- 34. Electrical & electronics
- 35. Electronic components & instruments
- 36. Energy equipment & services
- 37. Industrial components
- 38. Machinery & engineering

4. CONSUMER GOODS

- 41. Appliances & household durables
- 42. Automobiles
- 43. Beverages & tobacco

44. Food & household products

- 45. Health & personal care
- 46. Recreation, other consumer goods
- 47. Textiles & apparel

5. SERVICES

- 51. Broadcasting & publishing
- 52. Business & public services
- 53. Leisure & tourism
- 54. Merchandising
- 55. Telecommunications
- 56. Transportation—airlines

57. Transportation—road & rail

- 58. Transportation—shipping
- 59. Wholesale & international trade

6. FINANCE

- 61. Banking
- 62. Financial services
- 63. Insurance
- 64. Real estate

7. OTHER

- 71. Multi-industry
- 81. Gold mines

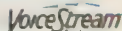


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971 Kubota (JA-131)
467 Kyocera (JA-59)
632 Kyushu Electric Power (JA-79)

L

490 Lafarge (FR-24)
869 Lagardere (FR-44)
589 Land Securities (BR-66)
321 Legal & General Group (BR-34)
829 Leggett & Platt (US-406)
747 Legrand (FR-39)
689 Lehman Brothers Holdings (US-340)
699 Lend Lease (AS-10)
172 Level 3 Communications (US-97)
539 Lexmark International Group (US-274)
108 Liberty Media Group (US-66)
419 Limited (US-210)
453 Lincoln National (US-227)
854 Linde (GE-32)
570 Linear Technology (US-289)
50 Lloyds TSB Group (BR-7)
634 Loblaws (CA-14)
309 Lockheed Martin (US-160)
532 Loews (US-271)
989 Loral Space & Communications (US-488)
265 Lowe's (US-143)
822 LSI Logic (US-400)
16 Lucent Technologies (US-13)
186 LVMH Moët Hennessy Louis Vuitton (FR-10)
944 Lycos (US-467)

M

985 M&T Bank (US-485)
894 Magna International (CA-23)
950 MAN (GE-35)
75 Mannesmann (GE-4)
274 Marks & Spencer (BR-26)
482 Marriott International (US-244)
262 Marsh & McLennan (US-141)
625 Marshall & Isley (US-311)
781 Marui (JA-107)
485 Masco (US-247)
383 Matsushita Communication Industrial (JA-45)
115 Matsushita Electric Industrial (JA-8)
631 Matsushita Electric Works (JA-78)
470 Mattel (US-237)
640 Maxim Integrated Products (US-319)
327 May Department Stores (US-171)
704 Maytag (US-345)
757 Mazda Motor (JA-100)
660 MBIA (US-326)
205 MBNA (US-112)
79 McDonald's (US-52)
455 McGraw-Hill (US-229)
14 MCI WorldCom (US-111)
510 McKesson HBOC (US-258)
999 McLeodUSA (US-494)
90 MediaOne Group (US-56)
473 Mediaset (IT-10)
693 Mediobanca (IT-17)
98 Medtronic (US-62)
263 Mellon Bank (US-142)
514 Mercantile Bancorporation (US-261)
12 Merck (US-10)
746 Merck KGAA (GE-27)
NR Merit (FI-5)
368 MeritaNordbanken (FI/SWE-NR)
140 Merrill Lynch (US-79)
280 Metro (GE-17)
608 Metromedia Fiber Network (US-303)
823 MGIC Investment (US-401)
734 Michelin (FR-38)
495 Micron Technology (US-253)
1 Microsoft (US-1)
125 Minnesota Mining & Mfg. (US-72)
866 Mysys (BR-94)
763 Mitsubishi Chemical (JA-102)
502 Mitsubishi Corp. (JA-62)
647 Mitsubishi Electric (JA-82)
374 Mitsubishi Estate (JA-42)
369 Mitsubishi Heavy Industries (JA-40)

952 Mitsubishi Motors (JA-128)
397 Mitsubishi Trust & Banking (JA-48)
462 Mitsui & Co. (JA-58)
997 Mitsui Chemicals (JA-135)
664 Mitsui Fudosan (JA-86)
44 Mobil (US-30)
877 Molex (US-432)
175 Monsanto (US-98)
987 Montana Power (US-487)
857 Montedison (IT-22)
73 Morgan Stanley Dean Witter (US-48)
188 Morgan J.P. (US-103)
983 Morgan International (US-437)
85 Motorola (US-54)
143 Munchener Ruck (GE-8)
353 Murata Mfg. (JA-37)

N

424 Nabisco Holdings (US-212)
190 National Australia Bank (AS-3)
225 Nations City (US-123)
469 National Gnd Group (BR-53)
488 National Power (BR-54)
110 National Westminster Bank (BR-11)
778 Nationwide Financial Svcs. (US-378)
278 NEC (JA-28)
91 Nestlé (SWI-3)
895 New Century Energies (US-443)
797 New World Development (HK-13)
728 New York Times (US-355)
839 Newbridge Networks (CA-22)
409 Newell Rubbermaid (US-204)
144 News Corp. (AS-2)
942 Next (BR-102)
430 Nextel Communications (US-215)
970 Nextlink Communications (US-477)
852 Nichie (JA-115)
289 Nike (US-154)
651 Nikko Securities (JA-83)
868 Nikon (JA-118)
294 Nintendo (JA-29)
732 Nippon Express (JA-96)
758 Nippon Mitsubishi Oil (JA-101)
907 Nippon Paper Industries (JA-121)
334 Nippon Steel (JA-34)
13 Nippon Telegraph & Telephone (JA-1)
936 Nippon Television Network (JA-127)
767 Nippon Yusen (JA-117)
432 Nissan Motor (JA-53)
38 Nokia (FI-1)
237 Nomura Securities (JA-22)
NR Nordbanken Holding (SWE-8)
836 Nordstrom (US-409)
375 Norfolk Southern (US-195)
522 Norsk Hydro (NO-1)
84 Nortel Networks (CA-1)
995 Northern States (US-492)
465 Northern Trust (US-235)
892 Northrop Grumman (US-442)
942 Norwich Union (BR-38)
29 Novartis (SWI-2)
590 Novell (US-298)
503 Novo-Nordisk (DE-4)
760 NTL (US-370)
755 NTT Data (JA-25)
727 NTT DoCoMo (JA-2)
939 Nucor (US-463)
920 Nycomed Amersham (BR-99)

O

496 OCBC Overseas Chinese Bank (SI-4)
624 Occidental Petroleum (US-310)
555 Office Depot (US-300)
786 Oji Paper (JA-108)
900 Old Kent Financial (US-446)
504 Olivetti (IT-12)
371 Omnicon Group (US-194)
924 Ono Pharmaceutical (JA-123)
122 Oracle (US-69)
297 Orange (BR-30)
100 Oreál (L) (FR-3)
806 Onix (JA-111)
562 Osaka Gas (JA-64)
929 Outdoor Systems (US-459)
908 Overseas Union Bank (SI-8)
962 Owens-Illinois (US-431)

P

934 Paccar (US-461)
802 PacificCorp (US-386)
657 PaineWebber Group (US-323)
860 PanAmSat (US-421)
279 Panibus (FR-16)
878 Parker Hannifin (US-433)
626 Paychex (US-312)
773 PE Corp. (US-376)
400 Pearson (BR-44)
461 PECO Energy (US-233)
499 Peninsula & Oriental Steam Nav. (BR-55)
354 Penney (J.C.) (US-186)
78 PepsiCo (US-51)
364 Petrofina (BE-4)
615 Peugeot (FR-33)
18 Pfizer (US-15)
357 P&G (US-188)
960 Pharma Vision 2000 (SWI-20)
160 Pharmacia & Upjohn (US-88)
35 Philip Morris (US-24)
350 Phillips Petroleum (US-184)
224 Pnault-Printemps-Redoute (FR-13)
529 Pioneer Hi-Bred International (US-268)

780 Pirelli (IT-20)
287 Pitney Bowes (US-152)
285 PNC Bank (US-151)
977 Popular (US-480)
974 Porsche (GE-36)
551 Portugal Telecom (PO-2)
648 PowerGen (BR-71)
442 PPG Industries (US-222)
872 PP&L Resources (US-427)
597 Praxair (US-301)
542 Preussag (GE-24)
898 Price T. Rowe (US-445)
306 Priceline.com (US-158)
22 Procter & Gamble (US-19)
457 Progressive (US-230)
171 Promise (JA-92)
370 Promodes Group (FR-21)
818 Provident (US-398)
1000 Provident Financial (BR-108)
344 Provident Financial (US-180)
178 Prudential (BR-17)
515 Public Service Enterprise Group (US-262)

Q

530 Quaker Oats (US-269)
323 Qualcomm (US-169)
914 Quintiles Transnational (US-452)
146 Qwest Communications (US-80)

R

448 Railtrack Group (BR-50)
550 Ralston Purina Group (US-278)
683 Randstad Holding (NE-20)
758 RAS (IT-18)
198 Raytheon (US-109)
673 RealNetworks (US-428)
913 Reckitt & Colman (BR-97)
292 Reed Elsevier (NE/BR-NR)
NR Reed International (BR-61)
552 Regions Financial (US-279)
525 Reliant Energy (US-267)
320 Renault (FR-27)
623 Rentanastasi (SWI-14)
401 Rentokil Initial (FR-45)
305 Repsol (SP-5)
602 Republic New York (US-315)
980 Republic Services (US-483)
298 Reuters Group (BR-21)
281 Rhône-Poulenc (FR-17)
592 Ricoh (JA-70)
243 Rio Tinto (AS/BR-NR)
NR Rio Tinto Ltd. (AS-17)
NR Rio Tinto PLC (BR-33)
900 Rite Aid (US-341)
466 RJR Nabisco Holdings (US-236)
28 Roche Holding (SWI-1)
445 Rockwell International (US-223)
315 Rohm (JA-33)
666 Rohm & Haas (US-331)
705 Rolls-Royce (BR-78)
324 Royal Bank of Canada (CA-6)
258 Royal Bank of Scotland Group (BR-24)
682 Royal Caribbean Cruises (US-337)
NR Royal Dutch Petroleum (NE-1)
5 Royal Dutch/Shell Group (NE/BR-NR)
139 Royal Philips Electronics (NE-6)
399 Royal and Sun Alliance Insurance (BR-43)
196 RWE (GE-14)

S

582 SABRE Group Holdings (US-296)
733 Safeco (US-358)
197 Safeway (US-107)
935 Safeway PLC (BR-101)
953 Sage Group (BR-103)
402 Sainsbury (J.) (BR-46)
326 Saint-Gobain (Compagnie de) (FR-19)
646 Sakura Bank (JA-35)
251 San Paolo IMI (IT-6)
777 Sandvik (SWE-12)
443 Sankyo (JA-55)
941 Sanmina (US-465)
138 Sanofi-Synthelabo (FR-7)
156 Sanwa Bank (JA-13)
706 Sanyo Electric (JA-90)
113 SAP (GE-6)
210 Sara Lee (US-115)
31 SBC Communications (US-22)
834 Scania (SWE-13)
641 Schering (GE-26)
59 Schering-Plough (US-40)
126 Schlumberger (US-73)
503 Schneider Electric (FR-26)
715 Schroders (BR-80)
636 Scotch & Newcastle Breweries (BR-70)
551 Scottish & Southern Energy (BR-62)
457 Scottish Power (BR-51)
667 Seagate Technology (US-332)
221 Seagram (CA-3)
828 Sealed Air (US-405)
229 Sears, Roebuck (US-145)
670 SEAT Pagine Gialle (IT-16)
615 Secom (JA-54)
803 Secunor (BR-88)
880 Securitas (SWE-14)
497 Seibu Railway (JA-61)
600 Sekisui House (JA-72)
831 Sempia Energy (US-408)
825 Service Corp. International (US-403)
812 ServiceMaster (US-393)
118 Seven-Eleven Japan (JA-10)

848 Severn Trent (BR-91)
767 Sharp (JA-39)
383 Shell Canada (CA-20)
NR Shell Transport & Trading (BR-6)
824 Sherwin-Williams (US-402)
975 Shikoku Electric Power (JA-133)
376 Shin-Etsu Chemical (JA-43)
724 Shiseido (JA-94)
533 Shizuoka Bank (JA-63)
885 Sidel (FR-45)
978 Siebel Systems (US-481)
109 Siemens (GE-5)
861 Simon Property Group (US-422)
420 Singapore Airlines (SI-2)
832 Singapore Press Holdings (SI-6)
181 Singapore Telecommunications (SI-1)
543 Skandia Forsakning (SWE-5)
642 Skandinaviska Enskilda Banken (SWE-10)
663 SLM Holding (US-329)
739 SMC (JA-97)
48 SmithKline Beecham (BR-5)
918 Smiths Industries (BR-98)
901 Smurfit-Stone Container (US-447)
820 Société Européenne des Satellites (BE-10)
281 Société Générale (FR-14)
796 Sodexho Alliance (FR-42)
340 Solectron (US-178)
790 Solvay (BE-9)
332 Sonera Group (FI-2)
112 Sony (JA-7)
591 Sony Music Entertainment (JA-69)
262 Southern Co. (US-130)
686 SouthTrust (US-338)
437 Southwest Airlines (US-219)
81 Sprint F&N Group (US-55)
247 Sprint PCS Group (US-135)
567 St. Paul (US-288)
911 Stagecoach Holdings (BR-96)
310 Standard Chartered (BR-32)
348 Staples (US-183)
665 Starbuck (US-330)
493 Starwood Hotels & Resorts (US-365)
739 State Street (US-198)
296 STMicroelectronics (FR-18)
602 Stora Enso (FI-3)
750 Stryker (US-366)
182 Suzee Lyonnaise des Eaux (FR-9)
116 Sumitomo Bank (JA-9)
684 Sumitomo Chemical (JA-88)
616 Sumitomo Corp. (JA-76)
588 Sumitomo Electric Industries (JA-68)
931 Sumitomo Marine & Fire Insurance (JA-125)
904 Sumitomo Metal Industries (JA-120)
753 Sumitomo Trust & Banking (JA-99)
645 Summit Bancorporation (US-320)
239 Sun Hung Kai Properties (HK-4)
598 Sun Life & Provincial Holdings (BR-67)
91 Sun Microsystems (US-57)
981 Suncor Energy (CA-24)
991 SunGard Data Systems (US-489)
213 SunTrust Bank (US-117)
653 Suzuki Motor (JA-85)
887 Svenska Cellulosa Aktiebolaget (SWE-15)
549 Svenska Handelsbanken (SWE-6)
889 Swatch Group (SWI-18)
639 Swire Pacific (HK-8)
705 Swiss Re (SWI-7)
176 Swisscom (SWI-8)
796 Synovus Financial (US-383)
476 Sysco (US-240)

T

425 Taisho Pharmaceutical (JA-52)
977 Takeda Chemical Industries (JA-6)
580 Tandy (US-294)
417 TDK (JA-51)
426 Tele Danmark (DE-1)
620 Telecom Corp. of New Zealand (NZ-1)
58 Telecom Italia (IT-1)
80 Telefonica (SP-1)
979 Telephone & Data Systems (US-482)
516 Telewest Communications (BR-56)
198 Tellabs (US-108)
62 Telstra (AS-1)
610 Tenet Healthcare (US-305)
922 Teradyne (US-456)
853 Terumo (JA-116)
248 Tesco (BR-22)
123 Texaco (US-70)
96 Texas Instruments (US-60)
365 Texas Utilities (US-192)
345 Textron (US-181)
856 TFI Télévision Française 1 (FR-43)
779 Thames Water (BR-87)
288 Thomson (CA-4)
787 Thomson-CSF (FR-41)
463 3Com (US-245)
671 3i Group (BR-74)
479 Thyssen Krupp (GE-21)
95 TIM (IT-3)
42 Time Warner (US-29)
959 Times Mirror (US-473)
489 TJX (US-249)
381 TNT Post Groep (NE-12)
594 Tohoku Electric Power (JA-71)
352 Tokai Bank (JA-36)
298 Tokio Marine & Fire (JA-31)
150 Tokyo Electric Power (JA-12)
486 Tokyo Electron (JA-60)
637 Tokyo Gas (JA-80)

574 Toppan Printing (JA-66)
673 Toray Industries (JA-87)
971 Torcharm (US-455)
307 Toronto-Dominion Bank (CA-5)
241 Toshiba (JA-24)
972 Tostem (JA-132)
141 TOTAL Fina (FR-8)
928 Toyo Seikan Kaisha (JA-124)
846 Toyota Automatic Loom Works (JA-4)
32 Toyota Motor (JA-3)
755 Toys 'R' Us (US-369)
428 Tractebel (BE-6)
519 Transcanada (US-264)
696 TransCanada PipeLines (CA-16)
314 Travelers Property Casualty (US-164)
500 Tribune (US-255)
531 Tronco Global Restaurants (US-270)
730 TRW (US-357)
720 TV Guide (US-351)
52 Tyco International (US-35)
817 Tyson Foods (US-397)

U

192 U.S. Bancorp (US-104)
961 U.S. Cellular (US-474)
64 UBS (SWI-4)
517 Unicom (US-263)
914 Unicredit Italiano (IT-5)
63 Unilever (NE/BR-NR)
NR Unilever NV (NE-4)
NR Unilever PLC (BR-18)
659 Union Carbide (US-325)
992 Union Electrica Fenosa (SP-10)
335 Union Pacific (US-174)
743 Union Planters (US-364)
721 UnionBanCal (US-352)
816 Uniphase (US-396)
480 Unisys (US-242)
431 United Healthcare (US-216)
833 United News & Media (BR-90)
687 United Overseas Bank (SI-5)
161 United Technologies (US-89)
718 United Utilities (BR-75)
805 Univision Communications (US-387)
492 Unocal (US-250)
618 UNUM (US-309)
605 UPM-Kymmene (FI-4)
166 U.S. West (US-92)
698 USA Networks (US-343)
807 UST (US-388)
511 USX-Marathon Group (US-259)

V

677 Valeo (FR-35)
908 Vastar Resources (US-390)
154 VEBAG (GE-9)
990 Verbund Österreichische Elekt. (AT-2)
964 Veritas Software (US-475)
913 VEW (GE-31)
785 VF (US-380)
211 Viacom (US-96)
382 Viacomp (GE-20)
967 Vitesse Semiconductor (US-476)
104 Vivaldi (FR-4)
575 VNU (NE-16)
70 Vodafone Group (BR-9)
173 Volkswagen (GE-11)
422 Volvo (SWE-4)
912 Vulcan Materials (US-451)

WXYZ

27 Wachovia (US-149)
195 Walgreen (US-106)
6 Wal-Mart Stores (US-5)
69 Walt Disney (US-45)
76 Warner-Lambert (US-50)
200 Washington Mutual (US-110)
768 Washington Post (US-373)
130 Waste Management (US-76)
732 WellPoint Health (US-379)
60 Wells Fargo (US-41)
565 West Japan Railway (JA-65)
355 Westpac Banking (AS-6)
371 Weyerhaeuser (US-196)
731 Wirth Holdings (HK-11)
659 Whirlpool (US-420)
538 Whitbread (BR-57)
881 Willamette Industries (US-435)
955 Williams (BR-105)
204 Williams (US-111)
815 Winn-Dixie Stores (US-395)
983 WMC (AS-16)
925 Wolseley (BR-100)
406 Wolters Kluwer (NE-14)
962 Woodside Petroleum (AS-14)
47 Woolwich (BR-49)
709 WPP Group (BR-79)
464 Wyng (Wm.) Jr. (US-234)
114 Xerox (US-67)
695 Xilinx (US-342)
662 XL Capital (US-328)
148 Yahoo! (US-81)
380 Yamanouchi Pharmaceutical (JA-44)
644 Yamato Transport (JA-81)
840 Yasuda Fire & Marine Insurance (JA-113)
838 Zions Bancorporation (US-411)
NR Zurcher Allied (SWI-6)
86 Zions Financial Services Group (BR/SW-NR)

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EMERGING MARKETS RE-EMERGE

Asia leads the way, as investors regain their enthusiasm for venturing abroad



Dead. Over. Done with. That pretty much summed up the attitude of portfolio investors for the last two years toward emerging markets, which they avoided like the plague. Investing in Thai banks, Russian oil pumpers, and Johannesburg gold miners looked like a formula for losing money. And it was. But something happened in the last six months: Investors rediscovered the thrill of making high-stakes bets on those very emerging-market bourses they recently spurned. The return of enthusiasm for venturing abroad is clearly reflected in BUSINESS WEEK's 1999 list of the world's top 100 emerging-market companies, ranked by market capitalization by Morgan Stanley Capital International.

Asia is benefiting from the biggest dose of optimism. Of the top five companies on this year's list, three are from Asia—compared with just one last year, cash cow China Telecom of Hong Kong. Big upward bounces in currencies helped

support the Asian surge. Skeptics say the recovery looks slow, unsteady, and fraught with pitfalls. But optimists counter that the region has clearly pulled back from the precipice. Lower interest rates, low inflation, economic growth, and good corporate earnings forecasts—not to mention bold attempts at reform in countries such as South Korea and Thailand—make a hot story for stockpickers. "It's fair to say large parts of Asia have 'gotten it' and are going forward," says Gary Greenberg, emerging-market portfolio manager for Van Eck Associates in New York. "We've got a sweet spot for Asia right now."

Asian companies aren't the only winners, however. The No. 1 spot on this year's list goes to Mexico's Teléfonos de México, known as Telmex. Investors love the Telmex story: Company chief Carlos Slim Helú actually delivers on

REAL STEEL

Investors consider Posco one of the best buys in Korea, which is showing new strength

phone service, boosts profits, and even buys back shares like a U.S. corporate giant. And since Wall Street expects 3% growth this year for Mexico, Telmex is a proxy for the whole economy—looks like a sure bet.

South of Mexico, though, the picture isn't so pretty. The real estate implosion has hit Brazilian companies hard, and the rest of the continent has felt the impact, too. The recent uptick in oil prices has relieved the gloom, keeping Petrobrás and Argentina's YPF in the Top 10. Although all the Latin American bourses will feel tremors from the Fed's expected hike, there's optimism that South American emerging markets will follow the recovery of Asia's recovery by the end of this year.

Even in Russia, confidence is returning after last summer's catastrophic collapse of the ruble. While most Russian companies slipped in rank on our list, and four fell off the list altogether, the 75% devaluation of the ruble and the jump in energy prices gave a boost to exporters. The

big beneficiaries: gas giant Gazprom (No. 3) and oil majors Lukoil (No. 4) and Surgutneftegaz (No. 74).

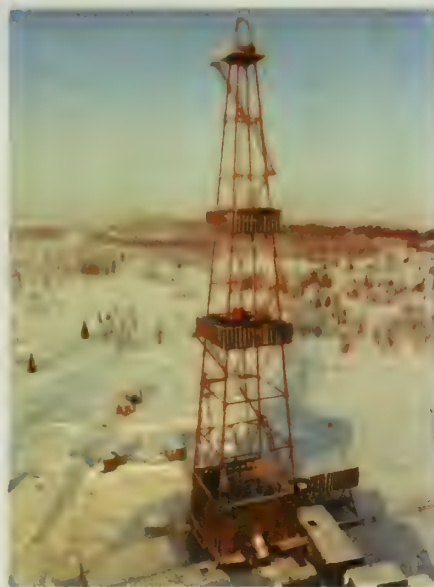
CURRENCY BONANZA. A fall in the local currency also yielded benefits to South African companies, which are still suffering from the plunge in world gold prices. The 20% drop in the rand helped the mining industry offset losses, since operating costs are priced in rand and minerals are sold in dollars.

But emerging markets aren't just commodity plays. High tech has its place on the list as well. Taiwan is a big winner this year. That's partly because Taiwan's biggest market is in the

ng U.S., where PC growth has re-
d steady. And multinational hard-
ware and semiconductor companies are
urcing more manufacturing to Tai-
wan makers of special chips, PCs, moth-
ersboards, and notebooks, including Acer,
Quanta, Asustek, and Inventec.
re seeing substantial increases in
sales from U.S. clients. Says Barry
CEO and founder of Quanta, which
ed on the list with an initial public
ing this year: "The U.S. market is
ing so well, and most of the PC
panies in Taiwan are doing a good
at keeping up with the trends."

South Korea—a bombed-out econo-
my just 12 months ago—has also found
strength. A restructuring of the fi-
nancial system has turned Korean banks
key beneficiaries of the recovery.
Korea's main bank (debuting at No. 88 this
year) benefited from a 22% purchase by
Citigroup, Sachs & Co. and saw its stock
price rocket eightfold since the dark
days of crisis.

UL SURVIVORS. Korean blue chips
did well in the new environment of
globalism. Utility Korea Electric Power
(KEPCO, No. 5), a government mo-
nopoly, is in the process of preparing a
stock sell-off to the public. To pretty



itself up, it has embarked on a cost-cut-
ting effort, thus driving up earnings and
cash flow. Korea Telecom (No. 8), the
backbone of the telecommunications sec-
tor, has also sold shares to outside in-
vestors. Korea Telecom and Posco (Po-
hgang Iron & Steel, No. 24), have their
place among what investors consider to
be the best buys in the region. "There's

REBOUNING IN RUSSIA?

*The devaluation of the ruble and a
jump in energy prices gave a boost
to Russia's oil and gas exporters*

been a lot of differentiation between
good and bad companies," says Yun
Seok, director of equity research at
Credit Suisse First Boston in Seoul.

Asia's rebound propelled Southeast
Asian markets too. In Thailand, bank
stocks were among the first to recover
as investors considered them bell-
wethers of an improving economy. Thus
Krung Thai Bank and Siam Commer-
cial Bank climbed back onto the list
after an absence of three years, as
hope returned that banks could clean
up their books and start lending pru-
dently. Says Bruce Steinberg, Merrill
Lynch & Co.'s chief economist: "We're
past the point where contagion is going
to happen again." And past the point
where investors flee en masse from
emerging markets.

*By Sheri Prasso in New York, with
Elisabeth Malkin in Mexico City, Jen-
nifer Veale in Seoul, Jonathan Moore in
Taipei, and bureau reports*

The Top 100 Emerging-Market Companies

RANK 1998		COUNTRY	MARKET VALUE U.S. \$ MIL	PRICE PER SHARE U.S. \$	%CHANGE FROM 1998 (U.S. \$) (LOCAL)	PRICE/ BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL	PROFITS U.S. \$ MIL	ASSETS U.S. \$ MIL	RETURN ON EQUITY %	INDUSTRY CODE
4	TELEFONOS DE MEXICO (TELMEX)	Mexico	33305	4	67	84	3.1	18	1.8	8063	1690	13180a	16.9 55
3	CHINA TELECOM (HONG KONG)	China	25294	2	21	21	3.9	30	0.0	3182	833	NA	12.8 55
1	GAZPROM	Russia	24502	10	-26	-26	1.3	61	0.1	5530a	405a	NA	2.1d 12
7	TAIWAN SEMICONDUCTOR MFG.	Taiwan	21627	4	45	40	8.8	57	0.0	1535	469	NA	15.6 35
32	KOREA ELECTRIC POWER (KEPCO)	Korea	19752	31	214	165	1.3	21	1.6	11870*	929*	41623*	6.1 12
11	ANGLO AMERICAN	South Africa	18487	45	-5	14	1.6	13	2.0	NA	808	8266	12.4 71
12	YPF	Argentina	15146	43	38	38	2.1	28	2.1	5501	580	13148	7.4 11
NR	KOREA TELECOM	Korea	14731	51	NA	NA	3.0	68	0.7	7396*	218*	NA	4.4 55
9	CATHAY LIFE INSURANCE	Taiwan	14157	3	11	7	6.6	31	1.4	NA	NA	NA	21.3 63
15	PETROBRAS	Brazil	13317	146	-24	13	1.3	20	2.4	10473	807	23313	6.4 11
46	SAMSUNG ELECTRONICS	Korea	12050	70	96	65	1.9	40	0.7	16929*	264*	19442a*	4.6 41
21	HINDUSTAN LEVER	India	11764	54	40	44	36.3	52	1.0	2213*	195*	823a*	69.7d 44
5	ELETRORAS	Brazil	11142	21	-34	-2	0.3	6	1.2	5033	1159	51257	4.9 12
14	HELLENIC TELECOMMUNICATIONS ORGANIZATION	Greece	10926	22	-18	-16	3.8	16	1.6	3039	687	NA	23.8d 55
59	NATIONAL BANK OF GREECE	Greece	10879	70	103	108	6.1	102	1.5	NA	78a	NA	6.0 61
37	ASUSTEK COMPUTER	Taiwan	9723	12	61	55	10.2	25	0.8	1076	354	NA	40.3 35
26	UNITED MICROELECTRONICS	Taiwan	9548	2	32	27	4.2	71	0.0	563*	135*	NA	5.9 35
NR	QUANTA COMPUTER	Taiwan	8922	21	NA	NA	17.1	32	0.2	1586	282	NA	54.1 33
28	TELEKOM MALAYSIA	Malaysia	8722	3	27	48	3.4	41	0.8	1781	215	5415a	8.5d 55
23	GRUPO MODELO	Mexico	8511	3	13	24	2.7	32	1.2	2125	242	NA	8.5 43
NR	TELEKOMUNIKACJA POLSKA (TPSA)	Poland	8503	6	NA	NA	3.7	32	0.0	2544	264	NA	11.6 55
18	DE BEERS CONSOLIDATED MINES	South Africa	8291	22	3	24	2.2	20	4.1	NA	407	4012a	10.8 26
27	CIFRA	Mexico	8044	2	20	32	2.9	27	0.0	5304	287	3661	10.8 54
83	POHANG IRON & STEEL (POSCO)	Korea	7767	81	134	97	1.2	16	1.3	9388*	946*	16540a*	14.8d 25
NR	KRUNG THAI BANK	Thailand	7552	1	304	271	3.4	-5	0.0	NA	-1660*	28721*	NEG 61
10	TELECOMUNICACOES DE SAO PAULO (TELESP)	Brazil	7397	123	-42	-13	1.1	12	5.5	2381*	630*	8246a*	9.6 55
164	SK TELECOM	Korea	7369	1117	281	221	6.1	58	0.1	2988*	128*	3459a*	10.5d 55
16	VALE DO RIO DOCE	Brazil	7048	18	-13	31	1.3	12	6.1	NA	599	9914a	10.7 26
20	TELEFONICA DE ARGENTINA	Argentina	6959	3	-1	-1	2.1	14	4.3	3435	511	6549	15.2 55
29	CHINA DEVELOPMENT INDUSTRIAL BANK	Taiwan	6790	2	-1	-4	3.3	24	0.0	NA	222a*	NA	13.9 62

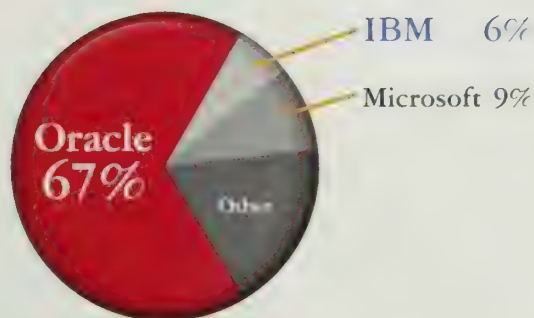
Based on nonconsolidated results. a) Based on 1997 data. b) Based on 1999 data. c) Results are for 12 months. d) Difference between earnings and book value. e) Data for this company provided by Standard & Poor's Compustat. NA=Not available. NEG=Negative return. NM=Not Meaningful. Data source: Standard & Poor's Compustat.

The Top 100 Emerging-Market Companies

RANK 1999 1998		COUNTRY	MARKET VALUE U.S. \$ MIL	PRICE PER SHARE U.S. \$	%CHANGE FROM 1998 (U.S. \$) (LOCAL)		PRICE/ BOOK VALUE RATIO	P/E RATIO	YIELD %	SALES U.S. \$ MIL	PROFITS U.S. \$ MIL	ASSETS U.S. \$ MIL	RETURN ON EQUITY %
31	66		ALPHA CREDIT BANK	Greece	6724	68	42 46	7.0	26	1.9	NA	246	NA
32	35	GRUPO TELEvisa	Mexico	6432	21	6 17	4.4	-492	0.0	1734	79	4338	NEG
33	25	LUKOIL HOLDING	Russia	6378	9	-11 -11	4.0	230	0.1	2170a	73a	NA	1.7
34	NR	PANAFON HELLENIC TELECOM	Greece	6377	25	NA NA	28.8	48	NA	660	133	NA	59.9
35	NR	TELESP PARTICIPACOES	Brazil	6231	22	NA NA	1.5	19	3.9	2379	394	8995	8.0
36	19	BANCO ITAU	Brazil	6091	509	-15 28	2.3	12	3.3	NA	512	NA	18.9
37	69	ITC	India	6071	25	50 54	15.4	42	0.4	820b*	145b*	743a*	36.8c
38	54	NAN YA PLASTICS	Taiwan	6032	1	15 11	2.3	31	0.0	3450a	191a	NA	7.6
39	38	MATAY	Hungary	5981	6	1 13	5.6	24	0.6	1331	244	NA	23.5
40	45	TENAGA NASIONAL	Malaysia	5929	2	16 35	2.1	-43	0.4	2559	-692	9784	NEG
41	41	CEMEX	Mexico	5748	4	9 19	1.1	6	3.0	4402	819	8509a	18.1
42	14	SOUTH AFRICAN BREWERIES	South Africa	5708	8	-43 -31	4.4	15	3.6	5222	371	3959	29.0
43	49	CHINA STEEL	Taiwan	5630	1	14 10	1.5	11	11.7	2988a	479a	NA	13.5
44	34	TELECOM ARGENTINA	Argentina	5602	6	-8 -8	2.1	15	5.0	3174	374	6133	13.7
45	65	SPT TELECOM	Czech Republic	5552	17	34 47	2.2	33	0.0	1273	168	NA	6.8
46	30	FIRST COMMERCIAL BANK	Taiwan	5455	2	-17 -21	2.3	23	1.8	NA*	228*	NA	9.8
47	85	MALAYAN BANKING	Malaysia	5434	2	69 96	2.9	NM	0.6	NA	29	25618	0.0
48	39	HUA NAN COMMERCIAL BANK	Taiwan	5279	2	-12 -16	4.1	22	1.8	NA	233*	NA	18.7
49	43	TURKIYE IS BANKASI	Turkey	5275	0	-1 56	4.9	10	3.8	NA	332*	NA	48.5
50	13	FIRSTRAND	South Africa	5186	1	-51 -41	3.6	46	2.5	NA	112	NA	7.7
51	68	FORMOSA PLASTICS	Taiwan	5163	2	19 14	2.9	26	1.3	1094	188	NA	11.1
52	55	PEREZ COMPANC	Argentina	5085	6	10 10	2.3	28	1.2	1309	205	4515a	8.0
53	56	TELECOMUNICACIONES DE CHILE (CTC)	Chile	5042	5	0 8	2.0	20	1.5	1542	265	5600	10.0
54	17	BANCO BRADESCO	Brazil	4914	5	-34 -1	1.5	9	7.9	NA	589	39857	16.0
55	64	TUPRAS-TURKIYE PETROL RAFINERILERI	Turkey	4871	0	14 80	10.1	21	0.0	2038*	237*	NA	48.9
56	33	NEDCOR	South Africa	4733	20	-25 -9	3.2	17	2.5	NA	355c	NA	19.3
57	NR	TELE NORTE LESTE PARTICIPACOES	Brazil	4731	17	NA NA	10.9	38	2.4	2999	102	8575	28.5
58	NR	COMMERCIAL BANK OF GREECE	Greece	4720	181	218 225	7.4	48	0.6	NA	98*	NA	15.4d
59	95	HON HAI PRECISION INDUSTRY	Taiwan	4626	6	54 49	9.0	28	0.0	1220	168	NA	32.5
60	40	KIMBERLY-CLARK DE MEXICO	Mexico	4620	3	-20 -12	3.7	19	3.7	1266	218	1564a	19.7
61	94	BANGKOK BANK	Thailand	4545	3	52 39	1.7	-3	1.7	NA	-1344	34271	NEG
62	63	ADVANCED SEMICONDUCTOR ENGINEERING (ASE)	Taiwan	4489	3	7 3	6.0	92	0.0	635	49	NA	6.6
63	88	TELEKOMUNIKASI INDONESIA	Indonesia	4479	0	45 3	3.4	19	1.3	817	145	2473a	17.8
64	97	SAN MIGUEL	Philippines	4397	2	46 43	2.7	46	0.9	2059	84	3179a	5.8
65	NR	WIPRO	India	4377	96	116 122	43.4	110	0.0	416b	40b	NA	39.3d
66	51	HELLENIC BOTTLING	Greece	4177	29	-13 -11	8.0	38	0.8	1377	110	NA	21.1
67	79	COPEC	Chile	4079	3	13 22	1.1	54	1.0	2905a	177a	5877b	2.0
68	110	ANGLO AMERICAN PLATINUM	South Africa	4019	19	54 86	4.9	18	3.3	975e	181e	1325	27.6
69	15	BANCO DO BRASIL	Brazil	4015	6	-55 -33	1.0	8	3.7	NA	506	NA	13.1
70	75	AKBANK	Turkey	3996	0	5 65	5.2	8	5.2	NA	487*	NA	65.0
71	36	CHANG HWA COMMERCIAL BANK	Taiwan	3992	1	-36 -38	2.2	24	2.3	NA	163*	NA	9.1
72	123	TATUNG	Taiwan	3984	1	70 63	2.9	-69	1.3	1016a	122a	NA	NEG
73	NR	EMBRATEL PARTICIPACOES	Brazil	3979	14	NA NA	1.5	67	NA	2326	72	4713	2.2
74	106	SURGUTNEFTGAZ	Russia	3958	0	50 50	2.4	58	0.2	992a	106a	NA	4.1
75	NR	ANGLOGOLD	South Africa	3857	39	-21 -5	3.2	16	6.4	1979	247	NA	NA
76	87	AYALA	Philippines	3841	0	23 20	3.4	22	0.5	NA	173	2779a	15.4
77	NR	GUDANG GARAM	Indonesia	3812	2	170 93	7.5	28	0.8	1235	138	809	26.9
78	98	ACER	Taiwan	3794	1	25 20	2.4	65	0.0	5186	76	NA	3.6
79	53	GRUPO CARSO	Mexico	3781	4	-19 -11	1.6	12	2.5	3685	294	4081a	13.0
80	60	REMBRANDT GROUP	South Africa	3731	7	-13 4	1.6	10	2.4	NA	360	2663	15.6
81	NR	UNITED WORLD CHINESE COMMERCIAL BANK	Taiwan	3688	1	NA NA	3.5	20	2.7	NA	185	NA	17.3d
82	73	RELIANCE INDUSTRIES	India	3684	4	-3 0	1.3	9	2.2	3128*	386*	5691*	14.2
83	67	PETRONAS GAS	Malaysia	3654	2	-11 3	3.9	17	1.4	359b	210b	1628	22.3d
84	24	LIBERTY LIFE ASSOCIATION OF AFRICA	South Africa	3653	14	-51 -41	1.2	10	5.5	1849	353	18316	12.0
85	127	ERGO BANK	Greece	3646	90	44 48	4.5	20	2.2	NA	168	NA	22.7
86	78	FEMSA	Mexico	3626	3	0 10	2.4	17	NA	3432	140	NA	13.9
87	NR	SIAM COMMERCIAL BANK	Thailand	3600	1	NA NA	1.2	-8	0.0	NA	-347*	NA	NEG
88	NR	KOOKMIN BANK	Korea	3565	15	206 158	1.4	58	1.1	NA	62*	NA	2.5
89	102	PHILIPPINE LONG DISTANCE TELEPHONE	Philippines	3556	29	14 12	2.4	122	0.4	1240	29	5120a	2.0d
90	50	SASOL	South Africa	3515	6	-27 -12	1.7	11	4.1	2686	332	3790	15.8
91	47	TELEFONICA DEL PERU	Peru	3425	1	-32 -21	2.0	24	3.9	1190	202	2674a	8.6
92	31	STANDARD BANK INVESTMENT	South Africa	3423	3	-46 -35	1.9	10	3.0	NA	308a	NA	18.4
93	44	CEMIG	Brazil	3420	22	-35 -3	0.7	12	12.0	1390*	281*	6586*	6.0
94	70	GRUPO FINANCIERO BANAMEX-ACCIVAL (BANACCI)	Mexico	3401	2	-18 -10	1.1	8	0.0	NA	359	30712	14.0
95	115	WINBOND ELECTRONICS	Taiwan	3347	1	15 11	2.3	-260	0.0	479	-12	NA	NEG
96	58	SHIN KONG LIFE INSURANCE	Taiwan	3345	2	-24 -27	3.6	NA	2.8	NA	37.6	NA	NA
97	61	CERVEJARIA BRAHMA	Brazil	3312	503	-14 29	4.4	19	2.4	1835	191	NA	23.0
98	57	NACIONAL TELEFONOS DE VENEZUELA (CANTV)	Venezuela	3307	3	-25 -17	0.8	14	6.3	2057	239	NA	5.5
99	NR	ADVANCED INFO SERVICE	Thailand	3290	12	NA NA	5.4	36	0.0	403	80	1	15.1
100	NR	INVENTEC	Taiwan	3242	4	NA NA	8.6	31	0.0	1528	105	NA	28.1d

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RUPERT DOES THE CYBERHUSTLE

Belatedly, Murdoch's News Corp. is tackling the Web

Rupert Murdoch's News Corp. sells \$12 billion a year worth of content to all corners of the globe, and Murdoch's place among history's top media magnates is secure. But when it comes to the Net, News Corp. has been seen as a laggard. While Web sites by such traditional media rivals as Time Warner, Walt Disney, and

room for a fourth U.S. TV network when he launched the Fox Network. He is ramping up a Web strategy aimed at extending into cyberspace an empire that also embraces the 20th Century Fox film studio, satellite broadcasters in Asian countries and Britain, newspapers in Australia and Britain, the *New York Post*, a handful of cable chan-

Disney and NBC pursue a new strategy using traditional media muscle to lure Web-users to their Go.com and Snap.com portals, Murdoch is betting on his interest in TV Guide Inc. He thinks active guides for cable TV could be the ideal portal for TV and, eventually, the Web. "We clearly are the groundwork for a much bolder approach to the Internet," he says.

"WAKE-UP." What's behind the belated move by Murdoch's son and News Corp. Executive Vice-President Lachlan Murdoch? Says AOL was only one instance last year the company passed on a couple of Web businesses whose stocks subsequently zoomed. Says Lachlan: "We were a couple of wake-up calls then."

To try not to miss any more in the future, News Corp. in April committed as much as \$300 million to create a new venture-capital company, called eNews, that will invest in Web businesses



FATHER AND SON

Rupert concedes that the company has missed past Net bonanzas. Now, James, 26, is orchestrating its online strategy

unrelated to its core media operations. A step in that direction was the plan announced July 1 announcement by partners that News Corp. and Softbank are forming ventures, a \$50 million partnership to launch versions of U.S. Web businesses in Australia, Britain, India, New Zealand. E-venture's first deal is to launch eLoan, the biggest online mortgage broker in the U.S., in those markets.

News Corp. will provide its local presence and marketing savvy, while Soft-

NBC routinely rank among the 10 most visited, according to Media Metrix, the most popular News Corp. information site ranked a withering No. 71 in May.

Murdoch admits he has missed some Internet bonanzas—such as his decision a few years ago against taking a stake in America Online Inc. "Bill Gates assured me [AOL] would be done by Christmas," recalls Murdoch. "He told me: 'They don't have a business plan.'"

But Murdoch won't concede he has missed his chance on the Web—any more than he accepted there was no

nels, and book publisher HarperCollins.

News Corp. seems to have awakened to the Web's possibilities—especially in the far-flung countries where the Internet is less developed but where Murdoch's tentacles extend. In Australia, it's launching career and auction sites; in Britain, it's rolling out a free Internet service provider, called CurrantBun, linked to its racy *Sun* tabloid.

Murdoch is also branching out into new Net territory, forging a partnership with the star of Web investing, Softbank Corp.'s Masayoshi Son. Meanwhile, as

bank—with big stakes in Yahoo! Inc. and E-Trade, among others—seems to know a good Web investment when it sees one. "What it does is marry the lead Internet investor with a new entrepreneurial group within a big media company," says e-partners CEO Mark Boonin, the former head of Murdoch's BSK satellite service. "We can deal at a speed and scale that we think is very unique. Keen on financial services, e-partners has also taken a minority stake in W. Hambrecht & Co., the Silicon Valley investment bank specializing in taking co-



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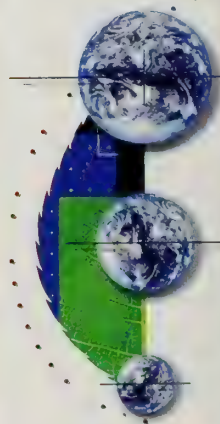
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is public on the Web via auction, though skeptical of Web stock valuations even at current levels, Rupert Murdoch is keen to make acquisitions—he predicts, there is a “major corner” in Web stocks. “There may be a few little companies that have really good ideas that are now selling for a couple of billion dollars that would then be selling for \$500 million,” he says. It would be of interest to us.”

SEA CHIC. And if the notion holds that the Internet is to be ruled by its somethings, Murdoch has that well covered in the family. While Alan, 27, has been pegged as the most likely to succeed his 68-year-old father, the company's online strategy overseen by the youngest of Murdoch's four children, James, 26. He operates News America Digital Publishing with offices in New York's hip Chelsea district—brimming with Fox online programmers and producers and located at a safe remove from News Corp.'s midtown office tower. In the past year, James has overseen a string of Webbed moves, including small stakes in mess site TheStreet.com, online service juno.com, pharmacy site PlanetRx.com, and, most recently, communi-

ty site sixdegrees.com. Typical of how media companies are trying to integrate Web businesses with so-called “old” media, TheStreet.com will be featured on a Fox News Channel TV show. And the stake in PlanetRx ties into Fox's plans to launch a Web site linked closely to its

RUPERT.COM

News Corp.'s Net push includes:

- A half-stake in *TV Guide* and its interactive programming guides to navigate TV-Web convergence
- The newly created \$300 million e-partners, which has formed a partnership with Softbank to launch U.S. Web businesses internationally
- Increased investment in newspaper sites in Australia and Britain, plus foxnews.com, foxsports.com, and fox.com
- Small stakes in Web companies TheStreet.com, Juno Online Services Inc., sixdegrees.com, and PlanetRx.com

new Health Network cable channel.

While he's constantly studying new deals and revamping Fox's existing sites, James's 200-strong group is also developing interactive TV services and broadband versions of the Fox news and sports sites for high-speed access services, such as At Home Corp. and Road Runner. With only 30% of Americans on the Web so far and with most of them using dial-up services for Internet access, such services won't be put to the test anytime soon.

But James believes that once broadband access becomes widespread in 5 to 10 years, content providers will win the day, thanks to their familiar brands, sports rights, and program libraries. And both father and son are of the mind that digital television—which will allow content to be ordered up on demand and played with—could prove a more viable business than the Web itself. “We're not freaking out about today,” says James. “We're trying to build long-term earnings stories out of these businesses.”

In News America's office, for instance, is a demo version of an enhanced broadcast for one of the many sports rights News Corp. owns—a Major

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ue Baseball game. Using a special te control and a variation of a set-ligital box being introduced later year to BSkyB subscribers, fans choose from a number of camera s from which to watch, check sta-s, or split the screen to watch a y. "We talk a lot about interactive ecause we think this is where all stuff leads," says James.

ORIA. It is also where News Corp. performed a feat of Web alchemy. year it merged what seemed a deg asset—TV Guide magazine—with a of John C. Malone's Liberty Media), that includes a maker of onscreen es. Partly on the strength of an ex-ve deal with new cable heavy AT&T),, TV Guide Inc. has since caught with investors excited about the pect of a screen that pops up every the TV—or whatever it evolves —is turned on. Through the guide, vers could be able to perform Web-tasks such as sending E-mail and ring pizzas. Since the merger was unced a year ago, News Corp.'s 49% e in TV Guide has increased in value il.3 billion.

hese days, of course, such gains from euphoria can seem routine. Even

with News Corp.'s stepped-up plans, the likes of Disney, Time Warner, and NBC remain more active and more advanced. Thomas Rogers, president of NBC Cable, says there are "a lot of questions" about whether consumers will rely on the TV Guide screen to navigate the digital

and E-commerce model that so far only AOL has perfected. "If you look at AOL as a big cable network, they've got a big market capitalization and these people want to encroach on it."

But better than most, Murdoch knows what Web mistakes feel like. Aside from

LONG VIEW "We're not freaking out about today," says James Murdoch. "We're trying to build long-term earnings stories out of these businesses"

world, or just click through it to another portal such as Yahoo! or NBC's Snap. And while Rogers agrees that it is too early in the media Web wars to declare winners and losers, he believes companies like his that have already established a beachhead have the edge. "Other companies have done more than us, but I don't know that they have a lot to show for it," says Rupert Murdoch.

The endgame, says Larry Haverty of State Street Research in Boston, is for all the media giants to try to grab a piece of the lucrative subscription, advertising,

missed investment opportunities, his failed mid-'90s attempt to build Delphi Internet Services into a major online service remains a blemish. "We made a lot of mistakes there," he admits. Clearly, he is determined not to repeat them. In fact, the just-remarried mogul was planning to cut into his honeymoon to fly to London to attend the announcement of the Softbank partnership. In old or new media, Murdoch plays to win.

By Richard Siklos in New York, with Stanley Reed and Heidi Dawley in London

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GENE

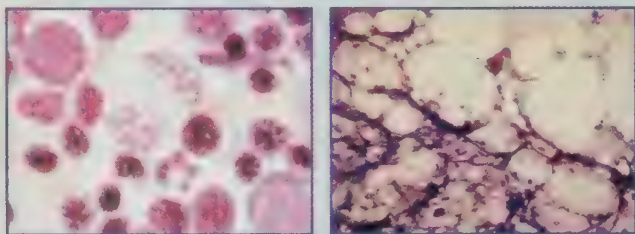
THEIR

ONE FAMILY'S STORY

For Dave and Lynn Frohnmayer of Eugene, Ore., and their children Mark, 24, Jonathan, 14, and Amy, 12, the joys of family life mingle with anger, denial, and grief. Missing from their portrait are two daughters, Kirsten and Katie, claimed by a rare and poorly understood genetic disease called Fanconi anemia. Kirsten, who responded to a controversial experimental treatment with a male hormone, lived to be 24. Katie, with more serious complications, died at 12.

The shadow of illness has still not left the Frohnmayers. Their third daughter, Amy, who just finished sixth grade, has long, blond, gently curling hair, blue eyes, and a fondness just now for green nail polish—and is also afflicted. This time, however, the family is hoping they will not, once again, be compelled to watch helplessly as a daughter dies.

Researchers around the world are beginning the first human trials of promising new methods of gene therapy—curing disease at the most fundamental level by correcting the



PICTURE OF DISEASE

■ Special cells in the bone marrow generate all of the body's blood cells. Healthy bone marrow is packed with developing red and white blood cells (left). In contrast, the bone marrow from a patient with Fanconi anemia is eerily empty (right), due to premature cell death.



EMPTYPY

The first attempts produced flickers of hope—but failed. For the Frohnmayer family, that left unrelenting grief. Now they're helping researchers fight the killer in their midst

Cover Story



THE FROHNMAYERS: AMY, MARK, DAVE, JONATHAN, AND LYNN

genetic errors responsible for it. The newest gene-therapy techniques represent a substantial advance over methods that were only partly successful a decade ago. These new efforts, and the further advances sure to follow, could ultimately transform the treatment of heart disease, cancer, and scores of other ailments—including inherited disorders such as Fanconi anemia.

Whether the new techniques will be perfected in time to save Amy is uncertain. But the Frohnmayers had no hope at all with their first two daughters. Fanconi anemia was a mystery to geneticists, who could describe the symptoms but had no idea what caused

Cover Story

them. Dave, then Oregon's attorney general and now president of the University of Oregon, and Lynn, a social worker, launched an effort to learn everything they could about the disease. When they realized how little was known, they started raising money to fund research. That effort blossomed into the Fanconi Anemia Research Fund Inc., a full-fledged research program that has raised \$6 million and led directly to the characterization of three of the eight genes known to be responsible for Fanconi anemia.

When the Frohnmayers began, only a handful of researchers had more than a casual familiarity with the disease. Now there are more than 40 scientists studying it in Amsterdam, Paris, Seattle, Boston, at the National Institutes of Health (NIH) in Bethesda, Md., and elsewhere. When Kirsten and Katie fell sick, the Frohnmayers could do little but comfort them. With Amy, they are in a race.

The first attempt to correct a genetic disease in a human being was made in September, 1990. W. French Anderson, then at the NIH, treated a four-year-old Cleveland girl named Ashanthi DeSilva suffering from a genetic disorder called adenosine deaminase deficiency. The disease stems from a mutation in the gene for an enzyme called adenosine deaminase, or ADA, and cripples the immune system, leaving its victims defenseless against infections. Anderson's treatment had worked well when applied to cells in a lab dish, but when he gave it to his young patient, it was disappointing. It produced only a partial correction of her ADA deficiency.

TROJAN HORSE. The treatment depended upon a clever strategy under development at the time in a handful of laboratories. The problem the researchers faced was that gene therapy would not be effective unless the corrective genes were inserted into the nuclei of thousands or even millions of diseased cells. In most cases, simply injecting the genes into the specific tissue where they were needed would have no effect, because the genes would not reach the cells' nuclei.

Investigators then realized that nature had given them an unlikely tool for the job. Many viruses produce disease by entering cell nuclei and integrating their genes with those of the cells. Anderson removed white blood cells from his young patient and mixed them with a specially engineered virus in

FIXING A GENE

Thousands of people, many of them children, die each year from genetic diseases. Too often, there is no treatment, only this wish: that biologists will learn to reach into cells and correct the fatal genetic error. Here's how researchers envision treating two such diseases, cystic fibrosis and Fanconi anemia.

■ Using molecular biology techniques a corrected copy of the gene is inserted into a modified virus.



which the key disease-causing genes had been removed and a working copy of the adenosine deaminase gene added. If the virus behaved as expected, it would infect the cells but instead of inserting viral disease genes, it would pass on the ADA gene. The infected cells would then begin to produce correcting Ashanthi's deficiency.

The experiment proved that the concept could work. Over a period of two years, the procedure was repeated about a dozen times, and her body now produces about 25% of normal amount of ADA. But that's not quite enough, Ashanthi, now 12 years old and in the seventh grade, continues to need injections of ADA. The gene therapy isn't efficient—the number of cells that acquired the corrected gene was too small. "We got a rude awakening," says Anderson. "It is much more difficult to get genes into cells than we thought it would be, and once in the cells, genes were turned off after a few days or weeks." The gene therapy eased Ashanthi's symptoms, but it wasn't yet close to a cure.

The disappointing outcome sent researchers back to the labs to design better viral delivery systems and other methods of getting genes where they needed to go. "All along,

THE GENE THERAPIST'S TOOLBOX

There are now many ways to deliver a corrective gene to affected tissue.

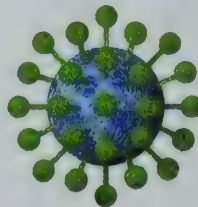
RETROVIRUS

ADVANTAGES

The inserted genes are stable and can carry large genes.

DISADVANTAGES

The introduced genes can disrupt genes and harm the cell. Or they can provoke an immune response.



NAKED DNA

ADVANTAGES

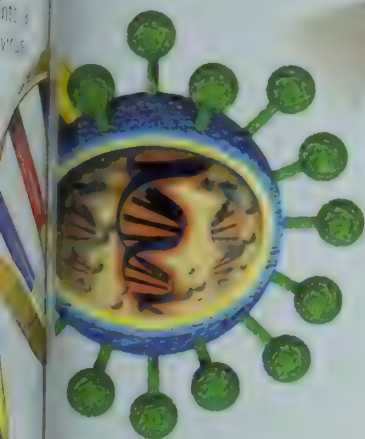
Doesn't cause an immune response. Can carry large genes.

DISADVANTAGES

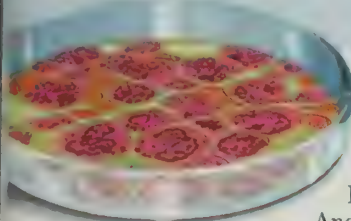
Inefficient at inserting genes into cells. Genes may not make enough product to cure a patient.



The virus is deactivated so it won't cause disease or an immune response.



■ To treat Fanconi anemia, bone-marrow cells are harvested from the patient and grown in the laboratory. Next, the cells are infected with a virus that introduces a healthy version of the Fanconi anemia gene.



three problems [with] gene therapy have been delivery, delivery, and delivery," says Dr. R. Michael Blaese, one of Anderson's colleagues at the

Researchers began to fine-tune their viral carriers to try to improve their efficiency. They also began to explore other means of getting genes into cells: Now, a new set of gene-therapy "tools" is available (below). "Within the next decade, there will be an exponential increase in the use of gene therapy," predicts Helen M. Blau, director of the gene-therapy technology program at Stanford University.

His research has also moved from academic laboratories to industry. Dozens of companies are now involved in developing gene therapy. Treatments for heart disease are likely to be available in the next two to three years from Valentis, Vical and Introgen Therapeutics are completing human trials of gene therapy for melanoma and head and neck cancer. Targeted Genetics has completed promising but

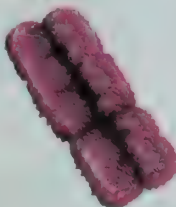
ARTIFICIAL CHROMOSOME

ADVANTAGES

Acts like normal chromosome. Does not cause immune response. Can carry large genes.

DISADVANTAGES

Inefficient at getting to cells and inserting genes into cells.



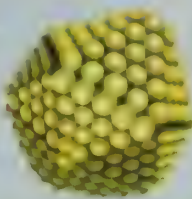
ASSOCIATED VIRUS

ADVANTAGES

Stable. Can insert itself into many types of cells.

DISADVANTAGES

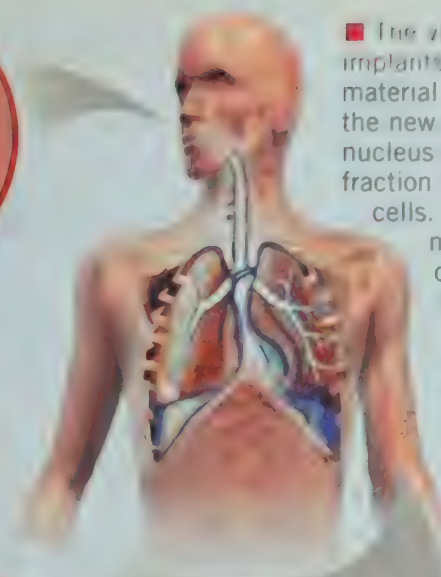
Only small genes. Difficult to manufacture in bulk.



■ To treat cystic fibrosis, an inhaler could be used to deliver the altered virus to the lung cells.



■ These cells are transfused back into the patient, where they begin to pump out blood cells and correct the anemia.



■ The virus implants its genetic material, including the new gene, in the nucleus of some fraction of the lung cells. The

modified cells then begin to make the protein needed to treat cystic fibrosis.

preliminary human trials of gene therapy to treat cystic fibrosis, while Cell Genesys, Avigen, and Chiron Technologies are targeting hemophilia.

The Frohnmayers have been waiting for treatments like this since 1983. "That had been a good time in our lives," Lynn remembers. "We had three wonderful, healthy children, and felt very blessed—when suddenly Kirsten got sick." Then 10 years old, Kirsten began to feel weak and tired and bruised easily. But she didn't have the signs of Fanconi anemia, which can include missing fingers, extra digits, or shortened arms and legs. Kirsten was, to all appearances, normal. "We had read about Fanconi anemia as a possible diagnosis, and we were grateful she didn't seem to fit the mold, because everything about the disease was so discouraging," Lynn says.

Lynn and Dave were celebrating their 13th wedding anniversary when they got the dreadful news about Kirsten. Additional genetic tests revealed that Katie, then four, also had the disease. Mark was unaffected. "In one blow, we went from thinking we had three very healthy children to realizing that both our daughters had a life-threatening illness.... It was just an overwhelming experience." And there was an element of unreality. "Passing either one of them on the street, you would never know anything was wrong with them," says Dave. "Kirsten was pale, but Katie was bouncy, bright, and vibrant."

Fanconi anemia is a recessive disease—it occurs only when children inherit two copies of the defective gene, one from each parent. The disease appeared only because Dave and Lynn, who each carry a single copy of the Fanconi gene, came together. Each of their children had a one-in-four chance of getting

GENETIC HAVES AND HAVE-NOTS?

As researchers perfect current methods of gene therapy, they are preparing for an even more profound development: *germ-line gene therapy*, in which changes made to a patient's genes would be passed on to all of the patient's offspring.

That possibility poses unprecedented ethical and practical questions. Bioethicists and scientists worry that the technology could be used by those

1 The corrective gene for an illness such as Fanconi anemia is added to a fertilized egg by injection. It will insert itself into the egg's genetic material.

seeking to create superhumans or designer babies.

Lee M. Silver, a biologist at Princeton University, is concerned that the technology could create a divide

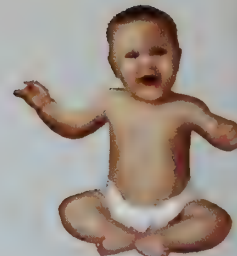
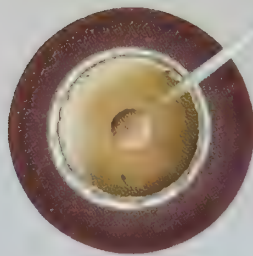
2 The egg divides twice. A cell is removed for testing to make sure the gene inserted itself correctly. If so, the other cells will be implanted in the mother's uterus.

between genetic haves and have-nots. "People who can't afford it will be disadvantaged," he says.

Even so, some scientists expect germ-line therapy to arrive soon. Gregory Stock,

3 Nine months later, a healthy child is born. The new gene is present in every cell so that she and all her offspring will be free of Fanconi anemia.

director of the Science, Technology & Society program at the University of California at Los Angeles School of Medicine, says: "It's not a question of if it will happen. It's a question of when."



two copies of the gene. It is only by chance that the disease struck their daughters and not their sons.

When Katie and Kirsten Frohnmayer were first diagnosed, little was known about the disease. It was far too uncommon to attract much attention from researchers: Fanconi anemia affects only about 1,500 Americans and 3,000 people worldwide. No one knew what gene was responsible for the disease or how it did its damage. All that was known was that

something was destroying blood-producing bone-marrow cells. Patients also had in-

creased susceptibility to cancer, especially leukemia. And there was no cure. The Frohnmayers learned about the potential of gene therapy from an episode of the National Public Broadcasting show *Nova* and realized that might be the one hope for their children. "If there was going to be a fix," says Dave, "that's the way it had to go."

Dave and Lynn immediately set out to find other families with Fanconi anemia to see what they could learn. "Our first support group had 19 families in it," says Lynn. "And David and I wrote out a newsletter at the computer on our kitchen table" in 1985. Kirsten's blood counts, meanwhile, were plummeting. "It was just horrific to watch," says Lynn. They took her to Harvard Medical School, where doctors advised treatment with a male hormone called oxymethalone. On the West Coast, experts said the treatment was worthless. "When she was 13, we put her on a male hormone. It was a horrible thing to do, but we felt that our backs were completely against the wall." Kirsten responded to the drug. Her blood counts improved and held steady. Then Katie developed the first symptoms.

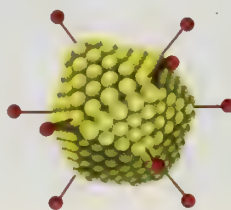
By 1988, the Frohnmayers were beginning to interest researchers in the disease. Dr. Arleen D. Auerbach, a geneticist at Rockefeller University, asked if they could raise \$50,000 for research. They wrote letters to friends and relatives and

soon had the money. The following year, two more researchers asked for funding. The Frohnmayers realized they would need help, so they assembled a scientific review board to assess the value of the proposed research. In 1989, Frohnmayers formalized their work with the establishment of the Fanconi Anemia Research Fund.

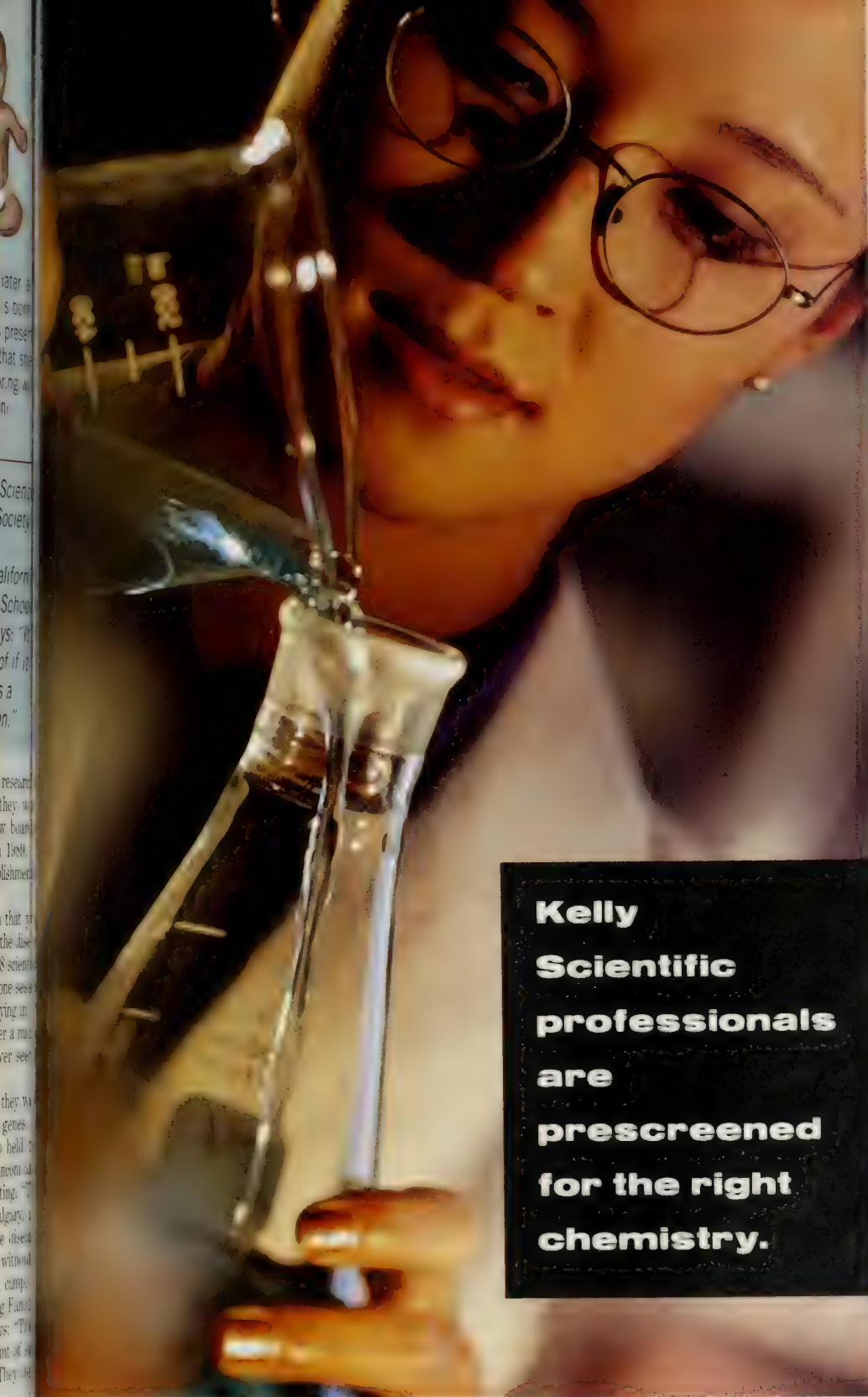
They also held their first scientific symposium that year. They invited every scientist who was working on the disease or who they thought might be interested. About 18 scientists attended, along with a number of patients. When one session of the symposium ended, Lynn found a scientist crying in the ladies' room. "I have been working with cells under a microscope," the researcher told her. "I have never ever seen a person with this disease."

DECODING TASK. The Frohnmayers used the funds they were raising to promote projects to find the gene or genes responsible for Fanconi anemia. In 1991, they also held the first of their annual summer-camp meetings for Fanconi anemia families. The getaways proved deeply comforting. "The camps are phenomenal," says Jack Redekop of Calgary, Alberta, who has a nine-year-old daughter with the disease. "With a disorder like this, you feel very distanced, without a lot of people to relate to." When he went to his first camp, he met several hundred people and some of the leading Fanconi anemia researchers. Of the Frohnmayers, he says: "They have to deal with their grief and an incredible amount of suffering, and yet it is inspirational to see them.... They deal with their grief and continue on."

By that time, Katie had developed severe complications, including a condition called *moya moya*, a narrowing of the carotid artery running up through the neck to the brain. That led to one stroke, and then two more, from which, finally, she could not recover. When she was 7, Katie had been told she had at most two months to live. She lived for five more years. "Mom, I am just so glad that I had these years," she told Lynn. At that point



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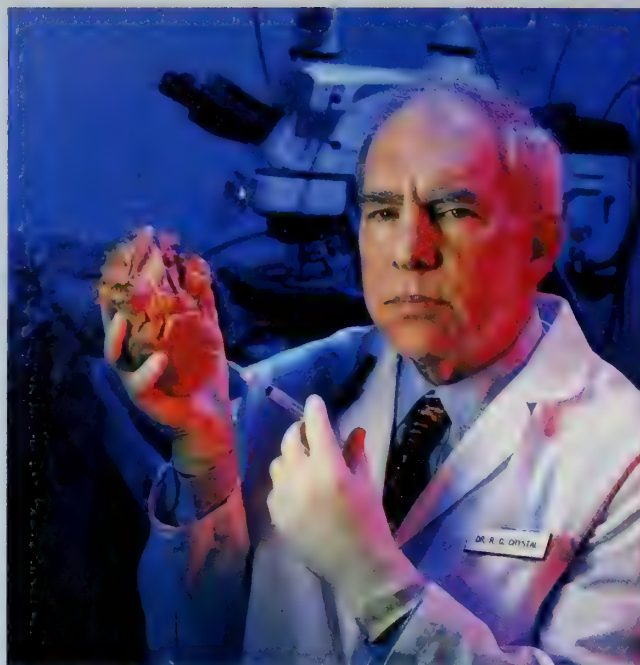
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GROWING ARTERIES

One of the most exciting frontiers in gene therapy is in the treatment of heart disease. Dr. Ronald G. Crystal of Cornell University's Weill Medical College in New York is one of several researchers who have devised an alternative to bypass surgery or angioplasty. Crystal's version of the therapy uses an engineered adenovirus with a gene that promotes blood-vessel growth. When the virus is injected into a patient near blocked coronary arteries, it can trigger the growth of new arter-



ies—a kind of “bio-bypass” around the clogged vessels. Early results are encouraging, but it will be at least two years before tests are completed,

Crystal said. The trials are being run by GenVec Inc. of Rockville, Md., with Parke-Davis Pharmaceutical Research, a division of Warner-Lambert Co.

she had been hospitalized 18 times in 14 months. Katie died in 1991. She was 12 years old.

The summer camps were giving researchers their first opportunity to collect blood and test DNA from a comparatively large number of Fanconi anemia families. Just after Katie died, the first Fanconi anemia gene was found—a direct result of the Frohnmayers' efforts to promote research. Two more genes have been found since, and re-

searchers now know there are eight genes that can cause the disease. Without this

Cover Story

knowledge, gene therapy would be impossible.

While the genetics of Fanconi anemia were slowly being decoded, gene therapy was moving closer to reality. Researchers who had been humbled by the earlier disappointments began to devise improved methods of delivering genes to cells. One of the most promising new techniques relies on a tiny organism called adeno-associated virus (AAV), already present in 80% of the human population. AAV is able to avoid the defenses of the human immune system, possibly because it does not cause disease. It can worm its way into a variety of cells in the brain, the nervous system, and the lungs that could not be reached by the first-generation gene-therapy viruses. When tested in mice and monkeys, the corrective AAV genes have functioned for up to two years so far.

Dr. James M. Wilson, director of the Institute for Human Gene Therapy at the University of Pennsylvania, expects to begin human-safety trials using AAV to treat muscular dystrophy and hemophilia later this year. “Now we have a more realistic view of what the delivery systems can and cannot do. That means we can match them to the diseases they are most likely to treat,” says Wil-

son. Chiron Techn Corp. is experimenti AAV to treat dogs w mophilia, while Targe netics Corp., in conj with Stanford Univer using it to treat sin inflammation in cystic patients. The results early safety trials, were announced in March, showed that therapy caused no s effects and reduced t nusitis of the 23 patie

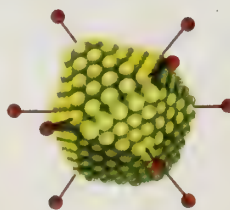
UNLIKELY HELPER. In haps the most stum turnabout in gene th Dr. Inder M. Verma, rologist at the Salk Ins for Biological Studies Jolla, Calif., is using the virus to make a gene- py delivery system. H developed a pared-dw activated version of virus that retains the a to infect cells but no l contains the deadly g that allow it to repro and spread. Like AAV can infect virtually e cell in the body. But be HIV is easier to manufa and can hold larger p

of DNA than AAV, Verma believes it could one day be the preferred viral delivery system.

Verma's lab has used the virus to deliver genes into brain, liver, muscle, bone marrow, and retinal cells of rats and mice. The genes seem to function for at least five months. Verma hopes his modified AIDS virus can do as well in humans. He expects his first human experiments to be directed against hemophilia and Fanconi anemia. There are at least other viruses being tested as potential gene carriers, including Epstein Barr virus (EBV) and the herpes virus.

Some researchers are simply abandoning the virus approach. Transgene and Valentis Inc. are developing tiny globules designed to carry tumor-suppressor genes directly into cancer tumors. Vical Inc. and Vascular Genetics have dispensed with delivery systems altogether. They inject genes directly into muscle cells in a procedure as simple as administering a shot of penicillin. The naked DNA, as called, is taken up by some of the muscle cells, where genes begin to function for at least a brief period. In the August issue of the journal *Nature Biotechnology*, researchers at GeneMedicine Inc., now part of Valentis, in The Woodlands, Tex., reported using this technique to produce the promising anticancer drug endostatin in the muscle cells of laboratory mice. The drug has proved difficult to manufacture, but with injections of endostatin genes, the muscle cells took on that job. The drug was soon moving through the blood streams of the mice, where it inhibited the growth of cancer tumors and helped prevent the cancer spread.

One drawback of these nonviral delivery systems is that they may be far less efficient than the viruses at getting genes into cells. In addition, the genes might not survive long enough to be of substantial help. Companies such as Chromos M



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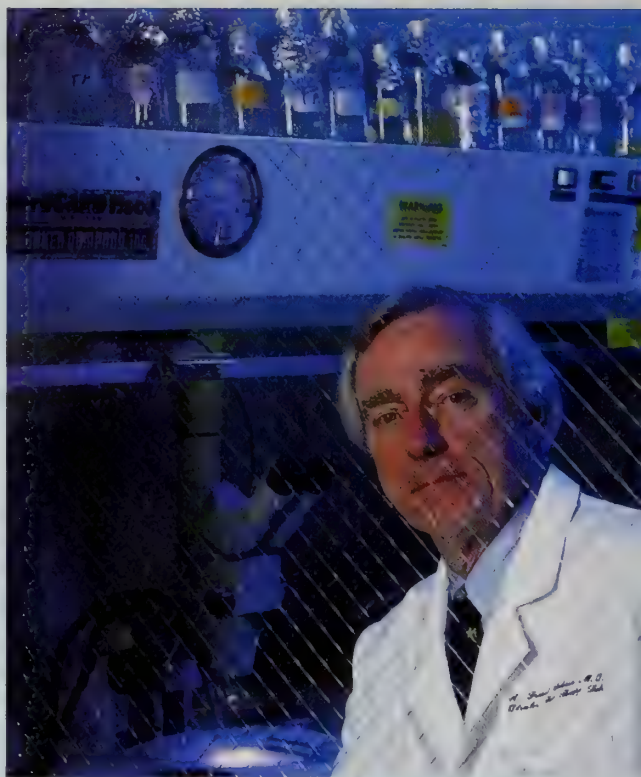
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SIEBEL

ON THE CUTTING EDGE

When W. French Anderson proposed the first gene therapy in 1987, he encountered some criticism. But that experiment was tame compared to what he's now considering: curing two inherited diseases by directly injecting genetic material into the tissues of the fetus.

The first disease is a hemoglobin deficiency that kills the fetus before it is born. The second is ADA deficiency, the "bubble



boy" disorder he treated in his 1990 pioneering trial. Anderson believes that fetuses are better candidates than children or adults because fetal cells divide so rapidly they may take up foreign genes more readily.

But there's also the chance the engineered genes may infiltrate the egg or sperm cell and alter the child's genetic legacy. "It's a powerful technology," Anderson admits. "We need to be sure we use it responsibly—only to treat genetic disease, not to create designer babies."

ecular Systems Inc. and Athersys Inc. are trying to find a way around these problems by developing artificial chromosomes—long, fibrous strings of genetic material that behave like human chromosomes. The artificial chromosomes are constructed so that the corrective gene is accompanied by components essential for long-term function in the cell. So far, studies of cultured human cells show that artificial chromosomes can be maintained for the lifetime of the cell. Getting enough of them into the target tissue is still a problem, however. Gil van Bokke-

AIDS virus to deliver Fanconi genes to bone-marrow cells. "I am quite excited," he says. "We haven't overcome all the obstacles, but it looks good."

Gene therapy's immediate goal is to slow or stop illness in Amy and millions of others who cannot be helped by conventional treatment. Ultimately, researchers could move toward gene therapy that includes correcting genetic defects in human sperm and eggs. Such germ-line therapy, as it's called, would not only correct disease in an individual but it would also eliminate the genetic flaw from all of that individual's offspring. Such a treatment could wipe out Fanconi anemia in the Frohnmayer family, for example. It could also mean families plagued by heart disease or breast cancer could avoid passing on that genetic vulnerability to their children.

If all this comes to pass, the genetic legacy we pass on to our children will, for the first time, be under our control. It would be a boon for treatment of disease, but it raises troubling moral and ethical questions. Some bioethicists worry that the power to alter genes could be turned to questionable ends, such as making human beings stronger or more intelligent. "We are kidding ourselves if we think we can say yes to therapy and no to enhancements," says Erik Parens, a bioethicist at the Hastings Center in Garrison, N. Y.

As with any emerging technology, gene therapy has met its share of failures. Enthusiasts were accused of overselling the concept when they couldn't deliver the goods five years ago. In 1995, a review panel at NIH published a report criticizing researchers and investors for rushing patients into clinical trials before fully understanding the unsolved problems that remained. Despite the advances in recent years, some researchers are still taking a wait-and-see attitude. "Gene therapy has not cured any disease up to this point. It's exciting, but a lot more animal research needs to be done," says Rockefeller University's Auerbach. Still, researchers are hopeful that recent advances are a signal that the second wave of therapies will be successful. "It appears that gene therapy has now turned a corner," says Anderson.

Sadly, these advances have come too late

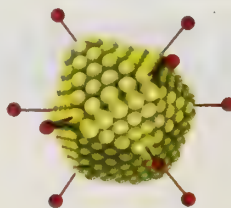
Cover Story

len, the CEO of Athersys, says human trials are several years away.

Even more fantastic are the attempts by some researchers to do more than simply add a corrective gene—they want to repair the existing error. "It's a form of molecular Wite-Out to correct the genetic typos," says Blaese, formerly of the NIH and now the chief scientific officer at Kimeragen Inc. The process would still require a delivery system, but the corrective genes would be constructed in such a way that they would replace the defective genes rather than just plugging in anywhere and going to work. With this approach, doctors would not have to worry about DNA inserting itself into the wrong place and potentially causing harm.

PRESSING ON. Dr. Johnson M. Liu, a hematologist at NIH, is using this approach with Fanconi anemia. Working with Amy Frohnmayer's bone-marrow cells, he has shown that he can correct the genetic defect that is causing her illness. The next step is to show that the technique will correct anemia in a mouse. If that works, humans—maybe even Amy—could be next. The first human trials are likely to be years away, but the Frohnmayers are pressing on. "You can never afford to lose hope," says Dave.

The most recent findings on Fanconi anemia were released on May 15 at the Frohnmayers' scientific symposium in Chicago. This year, the focus was on gene therapy. Verma presented the results of his most recent experiments, which use the



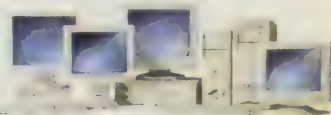


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help Kirsten Frohnmayer. The male hormone treatments she began as a child helped her to survive until she was 24. She died in June, 1997. Amy's future is uncertain, but it's conceivable that the experiments now under way could pay off

in time to save her life. On the wall in their living room, the Frohnmayers display

a pastel drawing of Katie when she was Amy's age. They look so much alike they could be twins. But Amy's future might be different from her sister's.

"It is a constant race against the old clock," says Lynn. "It is terrifying to be a patient—or the parents of a patient—and

to be desperately counting on gene therapy right now. Frohnmayers have made an enormous contribution to research that could help millions of others. "What we need," says Lynn, "is the hope that we can still save Amy. One could have a more powerful incentive."

In August, the Frohnmayers will gather with other families in Lake Geneva, Wis., for their annual family reunion. Some faces will be missing—the faces of children who died since the last gathering. With the promise of gene therapy, the Frohnmayers can hope that one day they will leave such a gathering knowing that the next time they meet, everyone will return.

By Ellen Licking in Eugene, Ore.

Cover Story

GENE-THERAPY COMPANIES CATCH THEIR BREATH

Because it promised to cure everything from cancer to hemophilia, the field of gene therapy captivated the imaginations of scientists and Wall Street in the early 1990s. However, as trial after trial failed to produce results, the excitement dwindled—and so did the cash.

Many startups didn't survive long enough to get their products through clinical trials, which can take up to 10 years. Consequently, investors have taken a much less optimistic view of the biotech sector, particularly gene therapy, than have scientists.

However, research into gene therapy is making slow and steady progress, and some analysts are betting that therapies will become available to the public within five years, primarily in the areas of cancer and heart disease. Large investors, though noncommittal, remain watchful. "The market is really in 'show me' mode," says SG Cowen analyst David K. Stone. "The question isn't 'Who has the technology?' It is 'Who will actually bring a product to market?'"

CONSOLIDATION. In order to grab that brass ring, companies have been fighting since the early 1990s to lock up the rights to the crucial gene delivery systems, such as bioengineered viruses. Both Vical Inc. in San Diego and Cell Genesys Inc. in Foster City, Calif., now hold substantial patent rights. To solidify its position as a major gene-therapy player, Novartis

Pharmaceuticals in East Hanover, N.J., consolidated its subsidiaries, SyStemix and Genetic Therapies, last September. Meanwhile, GeneMedicine and Megabios announced a merger and formed Valentis in Burlingame, Calif. in early April.

This increasing consolidation is a

the gene-therapy division of Rhône-Poulenc Rorer Inc.: "To be successful in gene therapy, you need to establish a knowhow that is beyond one company."

"NASCENT TECHNOLOGY." That knowhow, though, must be channeled correctly. Companies need to avoid the

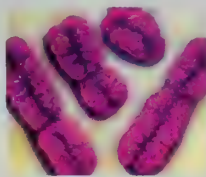
temptation to work on every type of gene-delivery system out there and to focus on making one successful. "It is a nascent technology, and it takes a lot of money, just as it does to launch a drug," says analyst Michael B. Sheffrey of OrbiMed Advisors.

Analysts predict that investors will come back as soon as a gene-therapy company shows it has a working product. A number of companies are vying for that honor. Vical's allvectin-7, which treats metastatic melanoma, began Phase III trials in May, 1998. And Introgen Therapeutics Inc.'s p53 therapy for cancer of the head and neck is also in end-stage trials. Both companies hope to launch products by early 2000. Bernard J. Gilly, chief executive of French gene-therapy company Trans-

gene, is spurring his researchers to develop delivery systems that are even more powerful. Says Gilly: "There is still a lot of work to be done, but I believe that gene therapy will be considered the medical weapon of choice 10 years from now." That should get investors excited again.

By Ellen Licking in New York

WHO'S FIGHTING WHAT



Gene therapy can be used to treat a wide variety of diseases including heart disease and cancer. These are some of the companies trying to cash in on the new gene medicines:

COMPANY

CHIRON (CHIR)

CELL GENESYS (CEGE)

INTROGEN THERAPEUTICS

GENETIC THERAPY (GTII)

TARGETED GENETICS (TGEN)

VALENTIS (VLTS)

VASCULAR GENETICS

VICAL (VACL)

RESEARCH PROGRAMS

Graft vs. host disease (GVHD), hemophilia

AIDS, cancer

Cancer

Cancer, heart disease, HIV, hemophilia

Cancer, cystic fibrosis, cytomegalovirus (CMV)

Cancer, cystic fibrosis

Heart disease

Cancer, hepatitis B, HIV

sign of just how difficult it is to excel in the many different research areas—from gene discovery to treatment delivery—that define a successful gene-therapy company. Smaller companies can have difficulty putting together the compelling data that they need to pursue a treatment on their own. Says François Meyer, a senior vice-president at RPR Gencell,

Q

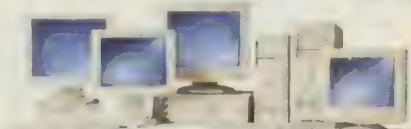
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TRENDS

THEY'RE RUNNING AS FAST AS THEY CAN

Sports-shoe makers hope some big changes will end their slump

The idea for Nike's latest shoe came from a car show. One of the company's designers, attending an auto show last year, spied a car with a paint job that seemed to change colors at different angles. Intrigued, he took the concept back to Beaverton, Ore., and Nike's design team began work on a dual-pigmented material that can be molded to a shoe. The results will hit stores this fall: the \$160 Air Flightposite, a basketball shoe that looks as smooth as a sock, with metallic hues that alternate depending on the angle it's viewed from. "It's the kind of product that looks like a superhero shoe," says Michael Wilskey, Nike's vice-president for U.S. marketing.

Auto paint mixed with comic-strip fashion is just the sort of out-there tactic the makers of athletic shoes hope will lift them out of a sales rut and back into the forefront of trendiness. In the past year, the industry has slashed costs, ditched scores of athlete endorsers, and produced ad campaigns designed to dispel the "Just Do It" seriousness of previous campaigns with humor, music, and urban cool. Now, amid nascent signs of sales improvement, the companies are poised to launch a slew of radical new designs, marketing deals, and technological bells and whistles in hopes of igniting not just a recovery but a new sneaker boom. The summer and back-to-school seasons are key for athletic-shoe makers, so much of the action will take place in the coming months.

DEATH BY KHAKI. It won't be an easy rebound. Nike Inc. Chairman Phil Knight has likened the industry's 1998 collapse to that of the Chicago Bulls. Just as the Bulls fell from the pinnacle of a "threepeat" to the cellar, so the sneaker companies went from hotshots to brands dismissed as dead.

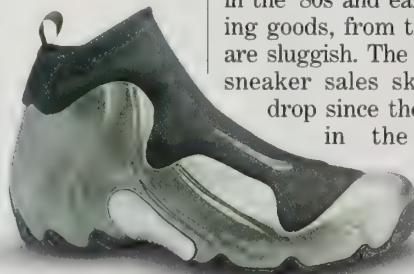
Until last year, sneaker makers were sprinting ahead. U.S. branded sneaker sales climbed 11.3%, to \$8 billion in 1997, following a 9.8% jump in 1996, according to researcher Sporting Goods Intelligence. Then, suddenly, "athletic footwear lost its fashion component," says Doug

THEN... ...AND NOW

Radical designs and colors, new technology, and more down-to-earth ad campaigns are starting to produce an uptick in sales

NIKE

Left: Air Jordan II
Right: Air Flightposite



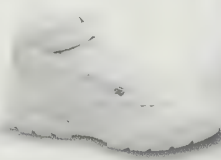
CONVERSE

Left: Chuck Taylor All Stars
Right: Helium



REEBOK

Left: White Aerobic Shoe
Right: Traxtar



SAUCONY

Left: Ms. Hornet
Right: Jazz Original



Ford, a principal at Kurt Salmon Associates. Teens and young adults tend to like the sameness of sneakers, and the clothing styles shifted from denim and khaki, which doesn't look good with athletic shoes. Instead of snapping up the latest from Nike, many shoppers are turning to leather shoes and sandals. Susan Kunchandy of Boston, 28, is a typical example. She once owned a pair of athletic shoes. Now, she has one for jogging—and five sets of shoes in different colors. Athletic shoes are not her current wardrobe? "It's a faux pas," she says.

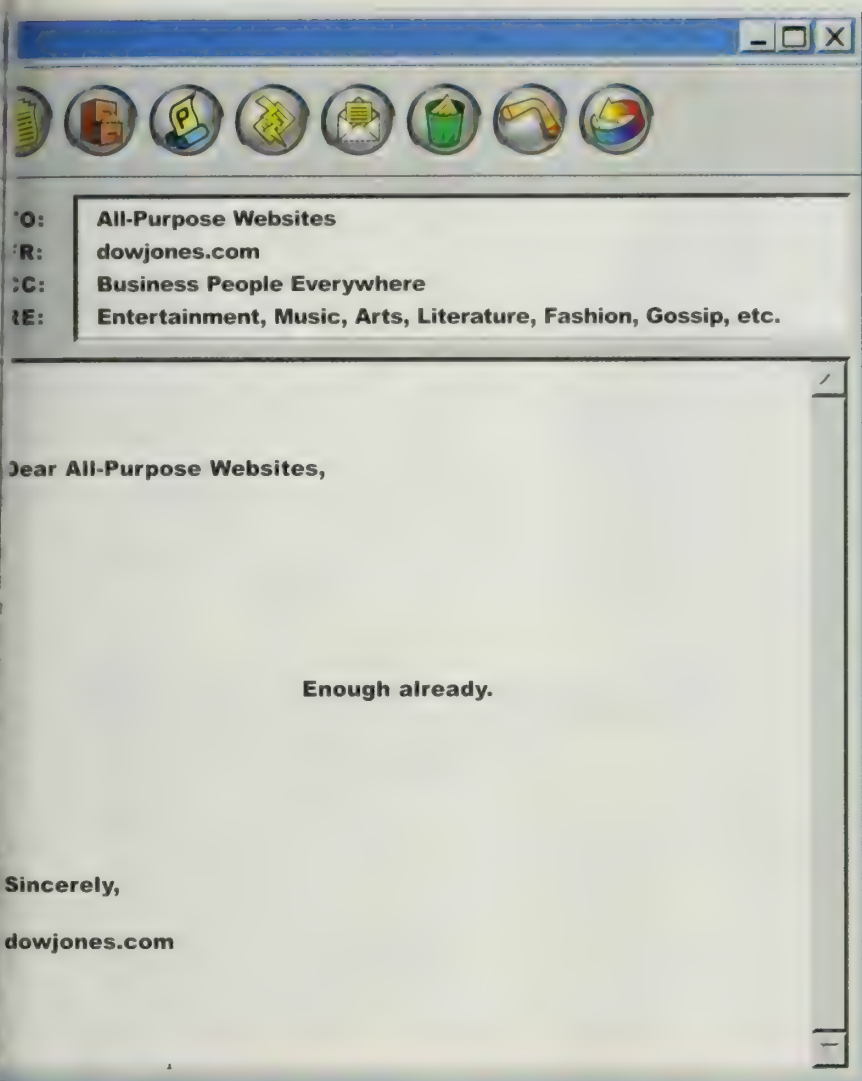
NASTY SKID. Nor could other, less fashionable markets make up for the drop in exercise is not the popular pastime it was in the '80s and early '90s. Sales of fitness goods, from treadmills to baseboards, are sluggish. The result: Last year, sneaker sales skidded 6%, the lowest since the sneaker boom began in the '80s. And plunged with it.

Nike's net earnings fell 50%, while Converse Inc. suffered a drop. And though Adidas-Salomon held on through 1998, this year, it has seen global profits slip.

So after months of hoping sneaker makers would make a comeback, manufacturers are broken with styles that remind them of the '80s. They hope to reinvent foot fashion the way they did in the '80s. Several new offerings look like they'd be more at home on a spaceship than a basketball court. And Chuck Taylor wouldn't recognize the camouflage or even the label on Converse's new \$100 basketball shoes, which are co-branded with rapper Master P.

"No Limit" lauded by the new looks. The new looks are welcome, says Pagnabris, spokesman for Venator, which is part of the Foot Locker chain, the largest specialty retailer of athletic shoes.

"A kid will be in our store 12 months after month, he loses interest," says Pagnabris. Meanwhile, sneaker makers "are coming substantially more customer-focused."



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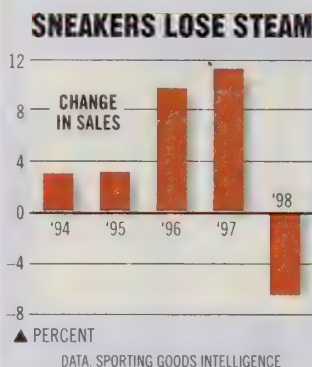
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by "moving away from white to colors" in shoes priced under \$65, which account for the vast bulk of sneaker sales, says Robert L. Mettler, president of merchandizing at Sears, Roebuck & Co. Reebok's line of Classics—once sold in white and black—now come in red, orange, and blue. And sales at Saucony Inc. are on pace to double, thanks to the smash success of its Jazz Originals, offered in a rainbow of colors. "The industry is becoming a lot more pragmatic," says Shawn Neville, a senior vice-president at Reebok. "It's not just about \$120 shoes anymore."

To be sure, companies are still counting heavily on expensive shoes, where they're introducing new technology to pump up sales. In November, Converse will launch the first-ever shoe cushioned by capsules of helium. "It's the most exciting thing we've ever done," says CEO Glenn N. Rupp. For holiday shoppers, Reebok will feature a new kid's shoe, the Traxtar, with a microprocessor that measures how far a child can jump. **CUSTOM FIT.** But the biggest change may come in how sneakers are made. Most of Adidas' new efforts focus on improved technology for shoes, such as a surface on the toe of their line of soccer shoes that looks like a ping-pong paddle. Others, including Reebok and Saucony, are racing to develop high-tech devices to measure feet. The resulting digital image could then be used to produce a shoe that is "partly standardized, partly customized to the individual shopper's foot," says Saucony of North America President Arthur Rogers. While technical hurdles must still be surmounted, the potential is enormous. A 1998 study by Footwear Market Insights found that 60% to 70% of consumers find it difficult to find shoes that fit well.

The new looks and gizmos have been accompanied by a shift in marketing tactics. Win-at-all-costs messages have been ditched for commercials heavy on humor and real people. Adidas ads now feature real-life situations with nary a shoe in sight. The latest show kids playing backyard football. Reebok President Carl J. Yankowski ignored the incredulous howls of his staff and jetted to New York earlier this year to sign Rosie O'Donnell and her "Chub Club" as endorsers. Hard-core athletes they're not. "But these women wear a lot of



the same period last year, reports research firm NPD Group, as the new marketing and designs began to bring customers back. Some smaller companies are doing a lot better than that. Sales at New Balance Athletic Shoe Inc. jumped 32%, to \$350 million, last year and are on track to hit \$525 million this year. Their secret: a focus on

shoes and have two feet. So what's wrong with this?" he says.

Something may be quite right. Reebok sold more than 50,000 pairs of shoes this spring via the Chub Club promotion. And they aren't the only ones finally seeing a bit of an uptick. Sales of all athletic shoes rose about 10% in 1999's first quarter, vs.

baby boomers, a segment who mand hardly flagged.

Most industry watchers blame sneaker companies as a whole for stopping the sales slide. Although Converse continue to limp badly—Converse Reebok are still expected to post sales this year—others, such as Nike, have begun to recover. "The worst is over," says Ford of Kurt Salmon.

But will the boom be back? There's a little sign of the surge that let companies like Nike quadruple in less than a decade. Athletic-shoe makers may have prospects for long-term sales growth are fairly modest," says analyst Landes of Thomas Weisel Partners. After 10 years of huge growth, the industry has matured," concedes Jim Lee, CEO of New Balance. And that's a road for any shoe to travel.

By William C. Symonds in Boston with Louise Lee in San Mateo, Calif.

MEANWHILE, THERE'S NO JOY IN MALLVILLE

Once unstoppable retailer Just For Feet Inc. has tripped. After five years of explosive growth, last month, CEO Harold Ruttenberg warned of lower earnings for the year. Standard & Poor's Corp. slashed its credit rating to junk-bond levels. "I thought this industry had hit bottom," says Martin E. Hanaka, CEO of rival Sports Authority Inc. "But this is a bad omen."

Welcome to one of the most troubled corners of U.S. retailing. Like Just For Feet, most athletic-footwear chains went on an expansion binge over the past five years. Now, they're facing a staggering hangover. Last year, the \$44 billion sector suffered huge losses and a stock market rout.

"LAND GRAB." The roots of the crisis lie in the early 1990s. With Nike Inc. roaring and sports hot, "a number of us were able to raise a lot of money on Wall Street," says Steven J. Schneider, CFO of Finish Line Inc. While Finish Line grew to 358 stores, from 100 in 1992, Sports Authority grew to 226 stores in 1998, up from 80 in

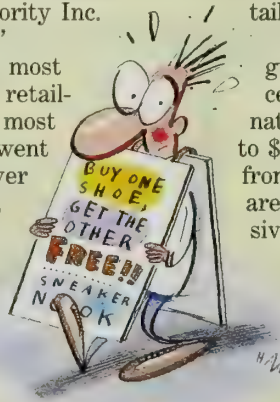
'93. "It was a big land grab," says Michael Godfredson, CEO of catalog rival Road Runner Sports.

But as sneaker and sports apparel sales collapsed last year, red ink gushed. Sports Authority lost \$64 million in the year that ended on Jan. 31. Venator Group—which owns Foot Locker, the largest sports-shoe retailer—lost \$136 million.

Repair efforts have begun. Sports Authority recently closed 18 stores. Venator cut its capital budget to \$175 million, down 68% from last year. Plus retailers are starting to demand exclusives from manufacturers to help differentiate their stores.

But even as retailers fix their own balance sheets, they must contend with the inventory liquidations of weaker brethren such as Just For Feet. What retailers really need is a surge of spending on sports. But with no signs of that, "profits will remain elusive," warns Robert J. Corliss, CEO of Athlete's Foot. And a true turnaround is something they can only dream about.

By William C. Symonds in Boston



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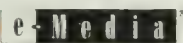
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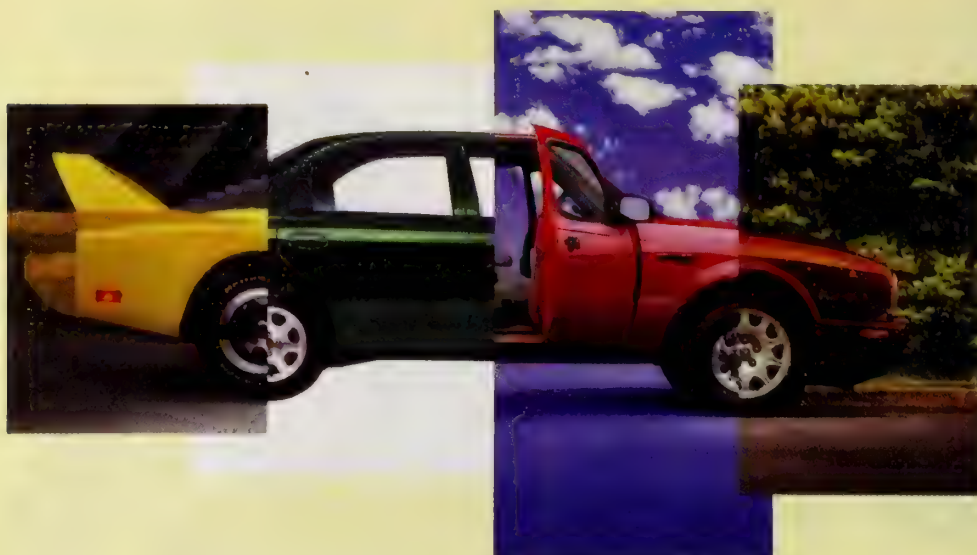
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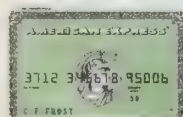
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IVERSITY

JESSE'S NEW TARGET: SILICON VALLEY



High-Tech Land claims it's meritocracy. So where, Jackson asks, are all the blacks and Hispanics

Jesse Jackson has seen the future of his push to win a bigger piece of prosperity for people of color—and it's in Silicon Valley. Whether self-proclaimed meritocracy needs sort of pressure for minority inclusion that Jackson has brought to bear Wall Street and elsewhere is debatable. But there is no question that Jackson is taking his economic road show to the vibrant heartland of the New economy, where whites command more than 90% of the CEO jobs and board seats at the top 150 public companies. Jackson's Rainbow/PUSH Coalition has bought about \$100,000 worth of stock in 50 of the biggest high-tech corporations. That gives Jackson entrée to annual meetings—a tactic he has used be-

fore. Later this summer, Jackson plans to open a staffed office in San Jose. He is recruiting an advisory board of top Valley executives to suggest ways to increase black and Hispanic participation in the region's high-tech work force—currently at 3.7% and 8.4%, respectively. And this fall, again mirroring his efforts on Wall Street, Jackson intends to host a conference that will address ways to better educate blacks and Hispanics for jobs in high tech.

UNABASHED. But the pragmatic culture of Wall Street, which at least appeared to respond to Jackson's exhortations, is a far cry from the bootstrap mentality of High-Tech Land. More important, Silicon Valley already has a diverse work force. Some 31% of the tech industry's engineers and professionals are Asian, and the Valley is a major employer of immigrants. Several have gone far in the Valley, such as Sun Microsystems co-founder Vinod Khosla, a native of India and now a venture capitalist.

Jackson acknowledges this but is

ECONOMIC ROAD SHOW: Jackson talking inclusion at a posh country club

pushing for corporations to reach beyond their traditional networks to tap minority-owned businesses—as money managers, lawyers, ad agencies, and vendors, thus widening their pool of money and talent. The peripatetic cleric, however, has little experience in the ways of the Valley. Here, among rolling foothills and million-dollar tract houses, financiers pumped \$4.5 billion into 786 ventures last year—numbers that dwarf startup investments anywhere else on earth. And the region is unabashedly proud that it has generated more than a third of the country's economic growth since 1995.

To its denizens, techdom thrives precisely because it is such a free market. Unfettered competition reigns; big government, regulation, and affirmative action are disdained. T.J. Rodgers of Cypress Semiconductor Corp. and Ronald K. Unz of Wall Street Analytics Inc.

were among the biggest backers of California's Proposition 209, the anti-affirmative action law passed in 1996.

Jackson scoffs at the idea that the Valley is a true meritocracy. "Everybody tells that lie," he says. But Valley execs are fervent. Says John T. Chambers, CEO of Cisco Systems Inc.: "We don't care what your sex is, how old you are, who your parents are, or your country of origin. If you're good, we love you." Rodgers of Cypress contends that Jackson's race-based demands are "striking at the heart of what makes the Valley successful." Told that Jackson is focusing on the Valley precisely because of its unparalleled prosperity, Scott G. McNealy, CEO of Sun Microsystems Inc., says: "If that's the case, it's terrorism."

But not every Valley exec agrees that Jackson should butt out. Frank S. Greene, CEO of New Vista Capital; Robert E. Knowling, CEO of Covad Communications; Roy Clay of Rod-L Electronics; and Kenneth L. Coleman, a senior vice-president at Silicon Graphics Inc., are all African Americans—and all part of Jackson's inner circle in the Valley. "There's big denial," says Knowling. "It's all about public image and big egos." Blacks, he adds, "have not had representation and won't get a part of the value creation unless they're sitting in board of directors seats."

Edward W. "Ned" Barnholt, the white CEO of Hewlett-Packard Co.'s soon-to-be-spun-off test-and-measurement unit, who has met with Jackson, says: "He's putting the spotlight on [the diversity issue] and... I hope that will bring about change."

Certainly, the demand for qualified

workers is huge. Currently, some 30,000 jobs in the Valley—out of about 480,000—are unfilled. And a great many positions are being taken by foreigners: Congress raised the limit for temporary work visas from 65,000 in 1998 to 115,000 in 1999 largely to accommodate high-tech demand. The ceiling was unexpectedly hit in June, and tech execs want to raise the limit to 200,000 for the year 2000.

That infuriates minority advocates. They point to Bureau of Labor Statistics data that show more than 300,000 African Americans and Hispanics hold engineering and scientific jobs. "That blows away the whole argument that



“It’s the same kind of stereotyping he’s done in the past. [Jackson] is screwing with my company, and he’s screwing Silicon Valley” —T. J. RODGERS, Cypress Semiconductor

there aren't enough qualified blacks," says John Templeton, director of the Coalition for Fair Employment in Silicon Valley, which promotes minorities in business. Maybe. But while recruiters concede they visit state and predominantly black schools less often than top-20 colleges, just 7.2% of engineering and computer science degrees went to blacks and 5.9% to Hispanics in 1996, says the National Science Foundation.

STREET VICTORIES. How Jackson aims to bridge the high-tech education gap of African Americans and Hispanics beyond raising awareness of the issue remains unclear. In fact, one of the frequent criticisms of Jackson's techniques is that they are heavy on showboating and light on follow-up. For example, the long-term effectiveness of other Jackson initiatives, such as the Wall Street Project, is open to question though he can point to several victories.

Two years ago, for the first time, the New York Stock Exchange closed on Martin Luther King Jr.'s birthday, in part because of pressure from Rainbow/PUSH. And Jackson's jawboning has gotten a handful of his favorite minority investment banks—such as Blaylock & Partners—signed up as co-managers of high-profile debt and equity underwritings, including

AT&T's \$8 billion bond offering and initial public offerings by PepsiCo, H&M Group and Goldman, Sachs & Co.

On the Street, however, Jackson enjoys the backing of Sanford I. Weill, co-chief executive of Citigroup and Richard A. Grasso, chief executive of the NYSE. They have opened dozens of file conferences attended by Bill Clinton. The President says he "strongly supports" Jackson's efforts to get Wall Street and now Silicon Valley to employ more minorities. "I think he deserves a lot of credit," Clinton says.

In Silicon Valley, Jackson has guardian angels like Weill and Grasso, though he is making high-level contacts. Intel CEO Craig R. Barrett has agreed to meet with Jackson in coming weeks. And in a mid-April visit to Apple

computer Inc.'s headquarters, Jackson pressed CEO Steve Jobs to include minorities on his board. When Jobs said Apple had a color-blind approach to business, Jackson says he counted. "The price you pay for blindness is being able to see opportunities." Apple declined to comment for this story.

As Jackson sees it, corporate executives' "cultural blinders" prevent them from recognizing markets. For example, African Americans spend \$3.8 billion on computer and consumer electronics gear, according to *Target Market News*, a Chicago report on black buying power. "We're trying to stop companies from boycotting the market," Jackson says. "They're the ones building the wall."

Is Jackson calling Valley execs prejudiced? "We can't be prejudiced or we'll be out of business tomorrow," fumes Rodgers. "When Jesse makes a generalization about business, it's the same kind of stereotyping that he's done in the past. He's screwing with my company, and he's screwing Silicon Valley."

For his part, Jackson vows that he will not rest until the boards and money managers and the employees like the customer market. "In Silicon Valley, that promises to be a long, hard sell."

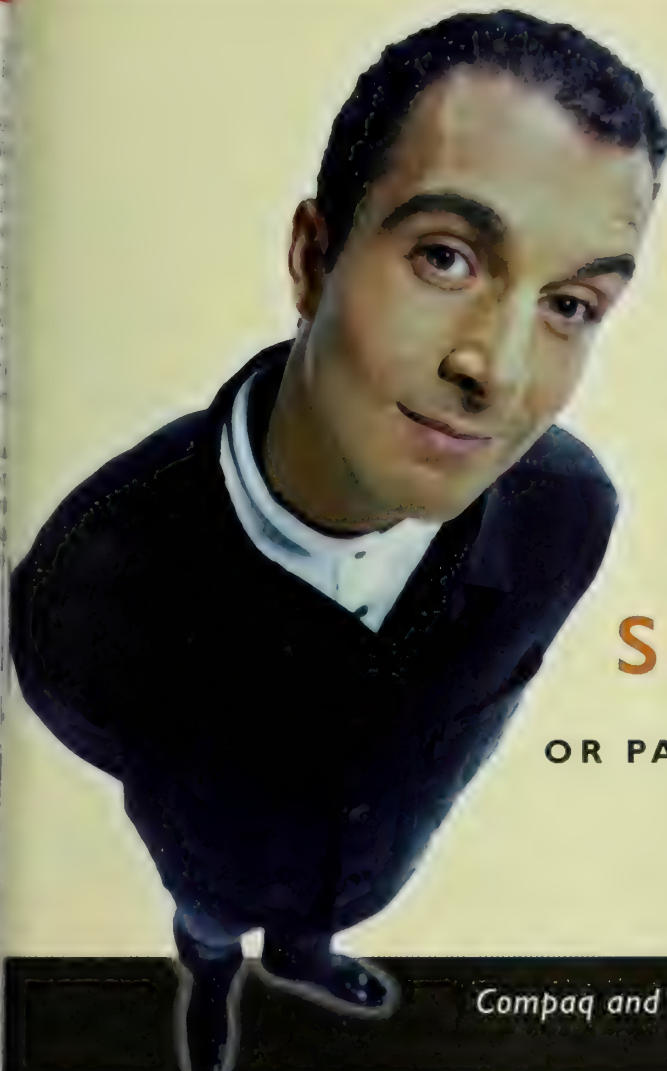
By Roger O. Crockett, with Andrew Reinhardt and Peter Burrows, in Silicon Valley, and Leah Nathans Spiro, New York

HOW WHITE IS MY VALLEY

White males dominate corporate boards in Silicon Valley. None of the five biggest technology companies in the S&P 500 index has a single black or Hispanic person on its board.

COMPANY	MEMBERS	BLACKS	HISPANICS	ASIANS
HEWLETT-PACKARD	14	0	0	0
INTEL	11	0	0	1
SUN MICROSYSTEMS	7	0	0	0
CISCO SYSTEMS	11	0	0	2
ORACLE	9	0	0	0

DATA: COALITION FOR FAIR EMPLOYMENT IN SILICON VALLEY

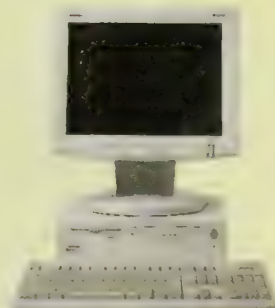


Is YOUR
computer
PART OF YOUR
business
solution ?
OR PART OF THE
problem

*Compaq and Windows NT Workstation.
A Better Business Solution.*

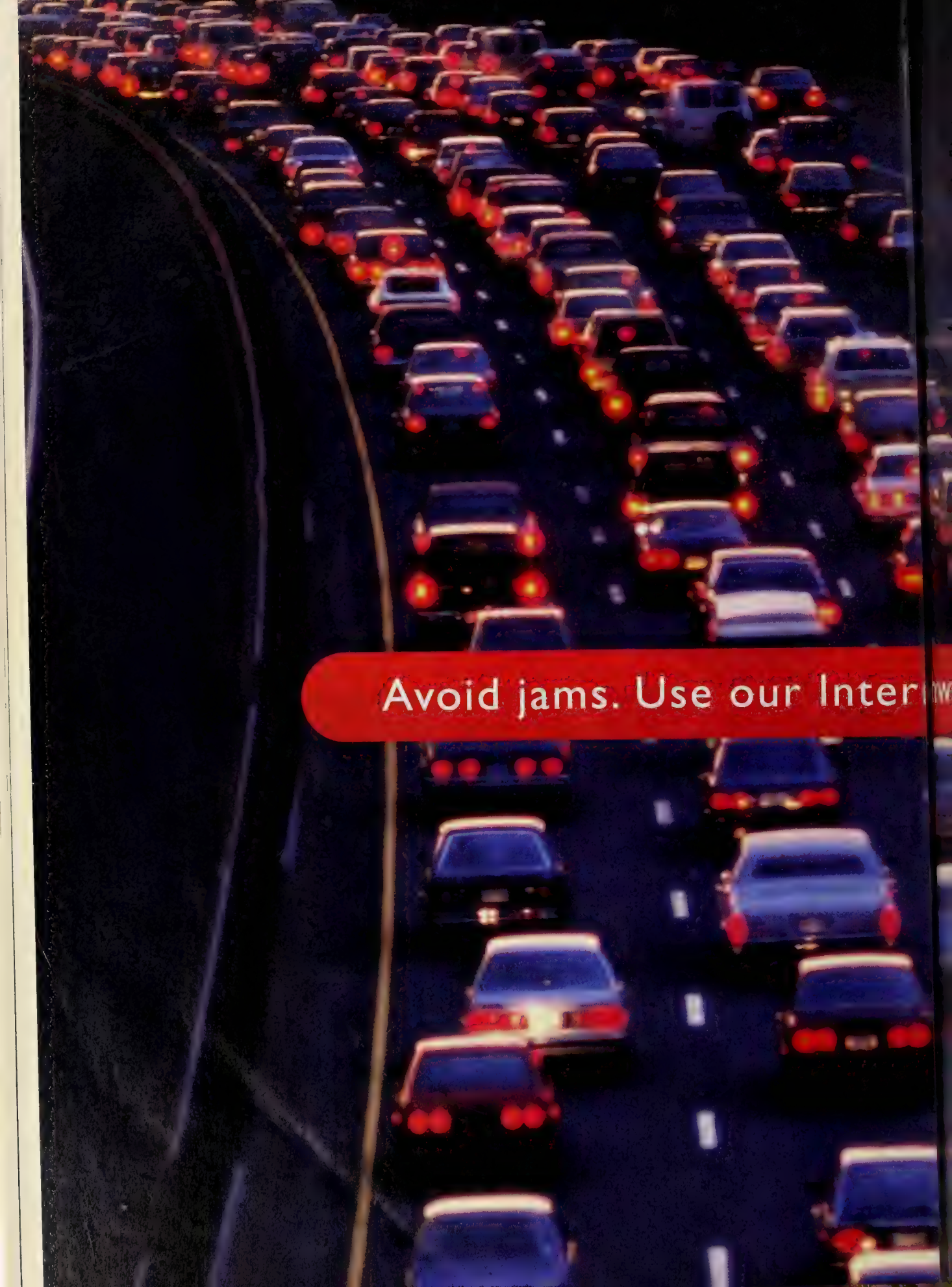
The Compaq Deskpro® EN Series running Microsoft® Windows NT® Workstation is the solution that addresses the changing needs of your business. Windows NT has increased reliability*, performance†, and the familiar Microsoft Windows® interface, all of which help you save time and money. Windows NT services and advanced management features from Compaq ensure that industry-leading Compaq Deskpro products integrate seamlessly into your organization. Windows NT Workstation on Compaq Deskpro – it's the solution that's all business. For more information or to get Windows NT Workstation on a Compaq Deskpro, consult your Compaq Authorized Reseller or go to Compaq's Web site:

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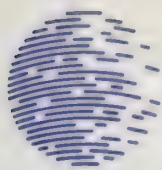


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*Intergraph Windows OS User Reliability Study (4/98). Participants using Windows NT Workstation were about three times less likely to experience serious system stoppages than users of Windows 95 surveyed.
†See recent Compaq Windows NT Workstation 4.0 to Windows 98 operating systems using Dell Dimension Workstation 7810 on computers with 64MB of RAM. Test performed without verification by ID. ID makes no representation or warranty. Windows is a registered trademark or trademark of ID. ID is the U.S. and other country.



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A BRISK MARKET IN INSURANCE RISK

These days, bondholders are snapping up what used to be laid off on reinsurers

Last July, the folks at Toyota Motor Corp. were getting nervous about the mountain of North American lease deals they had signed. Leasing is a lucrative business if you can sell the vehicles for a good price when they come off lease. But if the used-vehicle market is in a slump at that point, you're stuck with a parking lot full of white elephants.

What to do? In similar circumstances, some executives resort to prayer. Toyota shopped for specialized property and casualty insurance but couldn't find any

underwriting has been done by insurance companies and reinsurance companies. In the new deals, by contrast, the ultimate guarantors of risk are the deep-pocketed world financial markets. Toyota tapped the markets directly. More often in such new deals, insurers and reinsurers are doing the tapping—selling special securities that transfer risk exposure from themselves to investors who have an appetite for it.

This transformation has benefits all around. For one thing, people who need insurance get a new source of capital

competing for their business. That should drive down premiums and could someday make it possible to obtain coverage for massive risks once considered uninsurable.

Investors benefit, too, by becoming underwriters. "Risk securities" constitute a new class of investment whose performance isn't corre-

lated with stocks, bonds, or other holdings in their portfolios. Even though some risk securities are volatile, they add stability to a portfolio if they tend to zig when everything else is zagging. That's what diversification is all about—and it explains why institutional investors flocked to Toyota's bond issue.

WHO LOSES. Even insurance companies can benefit from the new wave of risk securities if they play their cards right. To be sure, the securities make it possible to cut insurers out of the picture. But if smart insurers use the new tools to reduce their own risk exposure, they can afford to write more policies than ever before. They can make their money from drumming up business, assessing risk, processing claims, and so on.

The losers? Well, the opening up of underwriting doesn't look like a healthy development for reinsurers, which insure insurance companies. Once insurance is sold off to investors, who needs a reinsurer? Just ask David Wasserman, president and CEO of Centre Solutions Holdings Ltd., an innovative player that changed its name from Centre Reinsurance to reflect its expanding role in the financial markets. "It's bad news for reinsurers," says Wasserman. "They could be disintermediated right out of the picture." Recognizing that, reinsurers are madly hiring investment bankers and doing deals to become leaders in the new field.

Risk securities are still in their infancy. Although more than \$3.5 billion of insurance risk has been sold in the market to date, that pales into insignificance compared with the \$2.1 trillion of conventional insurance that's purchased worldwide each year. Still, the enormous potential is attracting big players. Goldman, Merrill Lynch, and Lehman Brothers have already set up subsidiaries to design products that mimic insurance. Predicts Scott C. Stevenson, vice-president of Merrill's Alternative Risk Markets Group: "This won't take over the whole insurance industry, but it will be many, many multiples of its current size."

Indeed, legislators are making moves that could fuel an explosion in domestic deals. Today, most deals are done offshore, in places such as Bermuda. Illinois Governor George H. Ryan

Who's Using the New Securities

DATE	ISSUER	TYPE OF SECURITY	SIZE OF ISSUE MILLIONS
1995	NATIONWIDE MUTUAL	Contingent surplus notes	\$400
1996	RLI	Catastrophe equity puts	50
1997	USAA	Catastrophe bonds	477
1998	RELIANCE NATIONAL	Catastrophe bond options	20
1998	TOYOTA MOTOR	Corporate bonds	566
1999	ORIENTAL LAND	Catastrophe bonds	200

DATA: INSURANCE SERVICES OFFICE; COMPANY REPORTS

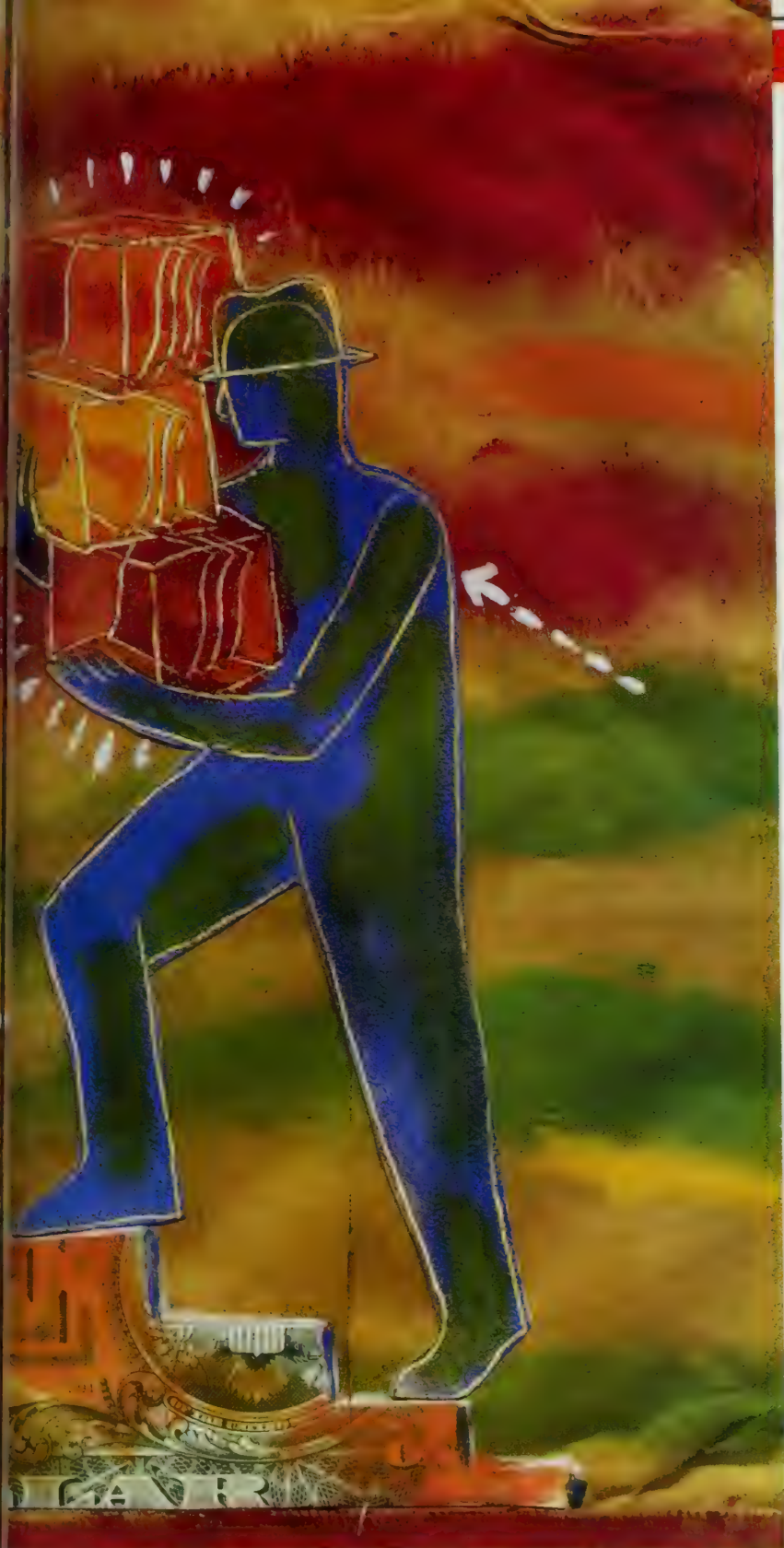
that fit its needs. So it chose a third route. With the help of Goldman, Sachs & Co., it set up a special company to issue a \$566 million series of bonds with an unusual payoff plan: If the residual value of 260,000 leased Toyotas is high, bond buyers will get all of their principal and interest payments. If the residual value falls below a certain threshold, payments will be cut. Bondholders could even lose all of their principal. These structured bonds, which mature in 1999, 2000, and 2001, took part of the risk of the leases away from Toyota and put it onto the backs of sophisticated institutional investors, who were happy to accept it in return for attractive yields (table, page 118).

Toyota and Goldman are in the vanguard of a movement that is beginning to shake the business of insurance to its foundations. Until now, nearly all

underwriting has been done by insurance companies and reinsurance companies. In the new deals, by contrast, the ultimate guarantors of risk are the deep-pocketed world financial markets. Toyota tapped the markets directly. More often in such new deals, insurers and reinsurers are doing the tapping—selling special securities that transfer risk exposure from themselves to investors who have an appetite for it.

This transformation has benefits all around. For one thing, people who need insurance get a new source of capital competing for their business. That should drive down premiums and could someday make it possible to obtain coverage for massive risks once considered uninsurable.

Investors benefit, too, by becoming underwriters. "Risk securities" constitute a new class of investment whose performance isn't corre-



Even insurance companies can benefit from the new wave of risk securities. If they use these tools to reduce their own exposure, they can afford to write more policies than ever

kind have been done in the insurance field. Instead, "securitization" in insurance typically refers to the selling of new types of securities, such as Toyota's structured bonds that transfer risk to the market. Says Jim Ament, vice-president for operations at State Farm Fire & Casualty Co., which has been involved in some deals: "Technically, you could transfer all kinds of risks that are not in the market today."

HAVOC. Risk securities really got their start after Hurricane Andrew tore through South Florida in August, 1992. The windstorm whipped up \$15.5 billion in losses and put several insurers out of business. Other insurance companies tried to raise their rates. Still others sought protection on the reinsurance market. For higher-risk customers, premiums shot through the roof.

The havoc got many people wondering just how reliable their insurance companies were. And it drew attention to a bigger, less visible problem: Most risks simply go uninsured. Sometimes it's because people don't mind bearing the risks themselves, but often it's because there's simply not enough capital in the insurance industry to insure everything out there. There is up to \$25 trillion worth of property in the U.S., but the insurance industry has only \$250 billion in reserves to cover possible losses. The imbalance is worsening as more people come to live in hurricane-prone Florida and earthquake-ridden California.

That has given impetus to catastrophe bonds, which are usually issued by insurance companies as an alternative to buying reinsurance. The bonds' payoffs

he will sign a law giving catastrophe-bond issuers tax and accounting treatment similar to what's available here, and similar legislation is being debated in other states. A committee of the National Association of Insurance Commissioners recently approved model legislation.

For investment bankers, it's just another opportunity to exercise their skills. Last year, Wall Street sold some \$200 billion in securities backed by mortgages, consumer loans, credit-card receivables, and the like. This bundling and reselling is what's commonly called securitization. To date, few deals of that

are tied to indexes such as, say, hurricane wind speeds along the Louisiana coast. Oriental Land Co., owner of Tokyo Disneyland, recently issued \$200 million in catastrophe bonds whose pay-offs are structured to protect Disney's revenues in case of an earthquake.

Insurance companies can buy catastrophe-index call options, traded on the Chicago Board of Trade. When a hurricane or earthquake hits, the gains on their call options offset their losses from claims. There are even catastrophe equity puts—which entitle the holder to raise money on a moment's notice by selling a block of equity to another party at a set price.

As investors grow more familiar with catastrophe bonds, they're willing to accept lower yields. The average spread has shrunk from about six percentage points more than the benchmark London InterBank Offered Rate (LIBOR) for the first wave of bonds to less than 2½ points over LIBOR for recent transactions. Investment bankers have been slicing the risk into different tranches, with bonds that offer a range of risks and returns to investors.

One pioneer is the United Services Automobile Assn. (USAA), which was a beneficiary of the first large-scale cat bond in June, 1997. The San Antonio company insures U.S. military families and has about one-third of its customers located in the states of California, Florida, and Texas. That leaves it especially vulnerable to natural disaster claims, which can be costly to hedge through traditional reinsurance.

HARD TO PREDICT. So the USAA approached several investment banks, which established Residential Reinsurance Ltd., a company in the Cayman Islands set up specifically to design and sell cat bonds to investors. The first deal sold \$400 million of hurricane-risk bonds for about 6% more than LIBOR. Residential Reinsurance issued \$450 million in bonds in 1998 and \$200 million in June, 1999, both at lower rates. Each time, private investors have snapped up the bonds. "We're very happy with the level of protection this gives us," says USAA spokesman Thomas D. Honeycutt. "A very sizable event could mess your calculations up if you just go with reinsurance."

But catastrophe bonds have problems. Despite sophisticated modeling software and other tools, catastrophes remain hard to predict. That makes it tough to put a price on some of these bonds and even tougher for investors to know how much risk they face.

That's why plain-vanilla policies such

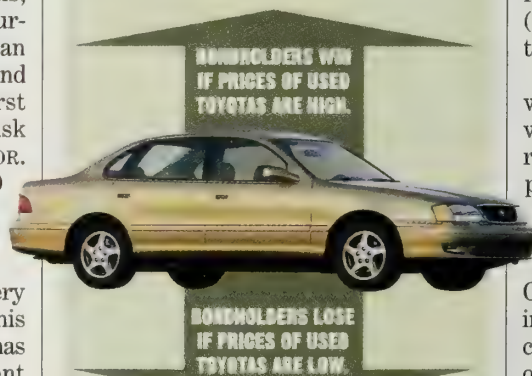
HOW TOYOTA TOOK THE RISK OUT OF AUTO LEASING



1 Toyota Motor leases out 260,000 vehicles. It's worried about what might happen if the used-car market is soft when the leases expire. The company might have to sell the Toyotas at a huge loss. It can't find suitable insurance.



2 Goldman, Sachs & Co. helps Toyota issue custom-tailored bonds that take away much of its exposure to used-vehicle prices. Institutional investors, who are willing to take on that risk in return for attractive yields, buy the bonds for \$566 million.



3 Toyota's bonds come in three levels of risk, or "tranches." The highest-yielding tranche pays 3½% over the LIBOR benchmark rate. But Toyota isn't required to pay that interest—or even pay back the principal—if the residual value of the leased cars is too low.

as auto, life, and homeowners' insurance may be even more promising gets to slice, dice, and sell as ties. "For a lot of us, catastrophe is the last thing that should be minimized," says Peter R. Porrino, director of insurance-industry services at Ernst & Young. He says securitization works best where it tackles basic and-better businesses that are easy to predict and divide into different levels. Last year, Germany's Hannover Re and Britain's National Provident Institution sold off part of their insurance portfolios, following the standard pattern for asset-backed securities. Experts say similar deals in the future are only a matter of time.

SWOLLEN RESERVES. Like most trends, the advent of new risk securities has its naysayers. "There's a lot more talk than action at the moment," says Brian Duperreault, president and CEO of Ace Ltd., a reinsurer in Hamilton, Bermuda. "The product can't get off the ground if there's no demand for it."

In truth, only a few dozen deals have hit the news in recent years. It's hard to compete with the deals being offered by conventional insurers these days. Reinsurers and reinsurers are caught in a vicious price war—one they can afford to wage, however, because their reserves are swollen from booming markets. "There have been few costly natural disasters in the past few years. Customers don't need to look anywhere else. 'If the cost of doing a bond is greater than any insurance premium, why would we do it right now?'" says David Burr, assistant vice-president of risk management in the Schaumburg (Ill.) office of Burlington Northern Santa Fe Corp.

Fair enough. But how much longer will insurers be willing to wage a price war? Analysts say insurers are bound to raise their prices in the next few years, perhaps because of an industry shakeout, a setback in the stock market, or a series of natural disasters. Says Chubb Corp. Chairman Dean O'Hare: "Once you see [insurers] changing the type of prices they should be charging, you'll see securitization take off like a bat out of hell."

To thrive in this world, insurers will have to embrace a new vision of the business. They will continue to identify risk, measure it, and even help price it, but they will be less and less likely to hold it on their books. The transformation just might energize some parts of the industry—and shatter others.

By Diane Brady in Greenwich, Conn., with Emily Thornton in Tokyo

Who's helped Navistar keep on truckin' since 1908?

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COMMENTARY

By Dean Foust

WHY IT'S SO EASY TO SCAM SMALL INSURERS

It was the perfect crime, as only novelist Ian Fleming could have conceived: A charismatic con man who moved between Connecticut society and the Vatican hierarchy using any of five aliases. A mysterious suicide at a reclusive financier's ritzy Greenwich compound. A byzantine network of insurance companies, all investing through the financier's London trading firm. And in the end, two fireplaces left ablaze with shredded documents, funds hastily wired to Swiss banks, and the disappearance of financier Martin R. Frankel, a.k.a. David Rosse and Eric Stevens, without a trace.

Except that Frankel isn't a figment of Fleming's imagination but the mastermind behind a real-life Ponzi scheme involving \$215 million—or much more—in missing funds. So far, Frankel's scheme has rendered insolvent two insurance companies that gave the fugitive financier funds to invest, left at least five others exposed—and raised disturbing questions about the adequacy of the state regulatory agencies charged with playing public watchdog over the nation's insurers.

COMPLEX TIMES. In an era in which global insurance conglomerates hedge their risks through complex derivatives and other financial exotica and move funds in and out of shadowy offshore affiliates, the network of humble state examiners suddenly looks like an anachronism from a simpler time. "Regulation in most states is inadequate," argues J. Robert Hunter, a former Texas insurance commissioner who now serves as insurance director for the Consumer Federation of America. "How do examiners in Oklahoma know that funds are being shifted across borders with the click of a mouse? And even if they do, does

Oklahoma work out a treaty with England or the Vatican?"

If there are any lessons to be learned from the Frankel saga, it may be that it's time for the federal government to assume an expanded role in regulating the nation's insurance companies, just as Uncle Sam serves as watchdog over banks and securities firms. At a minimum, the U.S. should

tween 1991 and 1995, U.S. insurers paid more than \$43 billion to the states in taxes, fines, and other fees. Yet state insurance departments received just \$2.8 billion, or 6.5% of those fees, in funding from their legislatures. Among the worst were—perhaps not coincidentally—the Southern states that Frankel targeted: Tennessee, which according to Best spent just 2.4% of the insurance fees it received in 1995, and Alabama, at 2.6%. "Regulators do need more money," maintains Michael A. Bownes, general counsel for the Alabama Insurance Dept. "Most departments are understaffed and underbudgeted."



It's time for the feds to keep tabs on insurance companies

The result isn't trivial: While banks are examined annually, most insurers undergo a thorough review only every three to five years. "Whose interest is this kind of time frame protecting?" Neil D. Levin, insurance superintendent for New York State, asked at an industry symposium last fall. "Is the regulator pretending to regulate, and are companies pretending to be regulated?"

This fragmented system also perpetuates a form of "regulatory arbitrage" in which insurance companies shop for the most accommodating regulator. After Alabama ordered one insurer to move its reserves from Frankel's brokerage to the safety of a bank, the insurer simply transferred its headquarters—at least on paper—to Mississippi and maintained the status quo. As long as such practices are permitted, mystery writers won't lack for material to write about.

adopt the Canadian model, which lets the federal government set solvency standards while leaving sales practices and other consumer issues to the provinces.

Granted, federal oversight raises issues of its own—namely, whether giving Washington a larger role creates an implicit taxpayer liability to cover the costs of any solvency crises. But it's fair to question whether states are up to the task of regulating the new breed of insurers. Truth is, in many states the insurance office is viewed not so much as a watchdog as a cash cow that lawmakers milk for other pet projects.

Consider this: According to the A.M. Best Co. rating service, be-

Foust covers finance from Atlanta.

Although he knew his current position was,
to say the least, compromising,
Oscar's urge to dig deeper was too strong to resist.



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BULLISH ON PAPER CLIPS

Merrill is off to a fast start in small-business E-commerce

This January, in a conference room at a Hyatt Hotel in Austin, Tex., John L. Steffens, vice-chairman of Merrill Lynch & Co., listened intently to a presentation by the head of a local Internet startup. Bo Holland, 34, explained how his company, works.com, lets small businesses buy everything from paper clips to PCs online. Right after the presentation, Steffens started negotiating an alliance. Says Holland: "We were totally blown away by how quickly these guys were moving."

When it comes to online trading, Merrill is playing catch-up to E*Trade Group Inc. and Charles Schwab & Co. But the Wall Street behemoth is racing for a foothold in a newer, equally hot Internet business: selling products and services to small businesses online, or b-to-b E-commerce.

EXCLUSIVITY. In early July, Merrill Lynch plans to announce a new service for the 400,000 small-business customers served by its Business Financial Services unit: buying office supplies on the Internet. Works.com customers already get a 15% discount, says Holland. Merrill believes it can negotiate additional discounts with some suppliers exclusively for its own small-business customers. Another advantage: Half of such customers use Merrill's small-business cash-management account, called WCMA, or Working Capital Management Account. They will be able to pay for, manage, and account for their works.com purchases centrally through

their WCMAS. And they earn reward points on their WCMA Visa card for their works.com purchases.

Merrill says it doesn't expect to make any money from providing this service but hopes to ultimately attract more assets. While Merrill is best known for catering to individual investors, many of its 14,000 brokers' wealthiest customers are entrepreneurs who already have a total of \$145 billion in WCMAS.

Online business procurement could become as popular as buying books online. Here's how Merrill's new service would work: For example, each of XYZ Co.'s 25 employees log on to Merrill Lynch On-Line, where they would link to a co-branded version of works.com. Employees put the items they want into an electronic shopping cart, generating a purchase request that is forwarded to an XYZ Co. approver. Once authorized, the order is received by the employee, as soon as the next day in the mail. Works.com obtains its office supplies directly from S. P. Richards Co., one of the largest U.S. office-products wholesalers.

VICE-CHAIRMAN STEFFENS: Negotiating an alliance with Internet startup

airline tickets online, says Steffens, later services such as printing and other resources. "We're using our purchasing clout and passing the savings on to customers," he says. "It exemplifies the power that Merrill Lynch brings to the table."

Merrill's objective is to become a small-business Web site. "Nobody knows what a business portal looks like," says Holland. "Merrill's angle is to be a financial portal. We're betting that chasing is a key capability for a business site, like search is key on a consumer portal." Bill Gurley, a works.com director and a partner at Benchmark Capital, a venture capital firm, maintains that Merrill and works.com are on to "the big idea out there" because the new service will automate the procurement process and tighten the supply chain by connecting Merrill's customers through the WCMA directly to wholesalers.

It's far too early to know whether

DIVIDEND Merrill thinks it can attract more assets to its cash-management accounts by selling office supplies online at a discount

The expenditure would show up on the monthly corporate WCMA statement.

While buying pencils and envelopes online seems fairly pedestrian, the works.com alliance sheds light on Merrill's broader Internet strategy. By taking a 10% stake in works.com, Merrill has ditched the do-it-yourself approach. And it plans to sell computer equipment and

Merrill's new venture will succeed. Competition is fierce, with others racing to provide their small-business customers with similar purchasing services, from software developer Ariba Inc. to Amazon.com Express Co. to Staples.com. But at least this time, Merrill Lynch is equipped with a good idea.

By Leah Nathans Spiro in New York





You
don't
take
breaks,
why
should
your
computer?



Corporate PCs: Intel® Celeron™ processor 366 MHz up to Pentium® III processor / Microsoft® Windows NT Workstation 4.0 / 64 MB RAM / Up to 13.5 GB HD / Up to MGA-G200 AGP graphics / HP TopTools management software / Starting at \$941*

Also available: Windows 2000 Ready PC. Ready with Windows NT Workstation ready with 300 MHz or more / 64 MB RAM or more. For more information see www.hp.com/windows2000/desktop

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A SLAP ON BEAR STEARNS' PAW

In the annals of securities fraud, the defunct microcap brokerage A. R. Baron & Co. was in a class by itself. At the racketeering trial of Baron Chief Financial Officer John McAndris last year, a parade of ex-brokers gave ample support to the view of Manhattan District Attorney Robert M. Morgenthau that Baron was a racketeering enterprise that defrauded the public to the tune of \$75 million. Their testimony also contained evidence that supported another troubling aspect of the Baron disaster—that Bear, Stearns & Co., which cleared trades for Baron, knew perfectly well what was going on.

Bear Stearns has long denied wrongdoing for its role at Baron. But it has been conducting protracted negotiations with the Securities & Exchange Commission that appear to be drawing to a close. In an SEC filing on June 28, the firm announced that it had reached an "agreement in principle" with the SEC staff to pay a fine of \$5 million, and to pay another \$20 million "to settle certain private claims."

It seems, at first blush, to be a slap in the face for Bear Stearns. The settlement's seemingly considerable size and precedent-setting nature were quickly noted in the financial press. But the stock market viewed the settlement as an assault on another part of Bear Stearns' anatomy—its wrist. Bear's share price rose swiftly after the news came out at midday. True, good news on interest rates boosted all financial firms, but clearly the settlement was viewed as a win for Bear Stearns.

NOT EVEN A DENT. And no wonder. For one thing, \$25 million is chump change for Bear Stearns, whose after-tax profits topped \$660 million last year—a good chunk of which comes from its clearance activities for smaller firms. The deal has several other positive elements from Bear's perspective. Word of the settlement

may put a damper on a criminal investigation of Bear's role at Baron being conducted by Morgenthau's office. Bear's role as clearing agent for yet another defunct brokerage, Sterling Foster & Co., is being probed by the U.S. Attorney in Manhattan. At Baron and Sterling

head off any possible criminal proceedings by Morgenthau's office. "That's a way of trying to convince the prosecutors that there's enough blood being paid pursuant to the agreement that they don't have to threaten the criminal sanction."

Coffee. Bear Stearns declined to comment on either the settlement or Coffee's theory regarding what was announced.

UNANSWERED QUESTIONS. To be sure, a number of variables remain undetermined—such as the scope of the settlement, or any further steps Bear may be required to take as part of its deal with the SEC. Also undetermined is the fate of Bear Stearns' chunk of clearing, Richard Harrington. Morgenthau's office and the SEC are investigating Harrington's relationship with Baron Chief Executive Andrew Bressman, who pleaded guilty to illegal activities at Baron. Harrington's lawyer, Howard Wilson, declined comment on the criminal probes and said his talks with the SEC were continuing.

True, the final settlement may contain various requirements to ensure that Bear could never again turn a blind eye to small investors being



**\$25 million is chump change for Bear Stearns
whose aftertax profit topped \$660 million**

IN NOVEMBER, 1998, BUSINESS WEEK DETAILED ALLEGATIONS AGAINST BEA

alike, the issue is the same: Did Bear abet investor ripoffs?

The looming criminal probes may well explain why the settlement was announced. Bear Stearns could have kept mum about it. John C. Coffee, a professor at the Columbia University School of Law, says that "it's kind of noteworthy that Bear Stearns was rushing to get this information out." He says the settlement was far too small to require an SEC filing by a company of Bear Stearns' size.

Coffee believes word of the tentative settlement was rushed out to

ripped off. But 30 cents on the dollar for Baron customers? It might be adequate if Bear Stearns did not actively help Baron fleece investors. But what if its role was more extensive? If indeed the evidence points to Bear Stearns' actively helping A. R. Baron, the SEC should reject the settlement worked out by its staff—annihilate Bear accountable for every penny that was lost by A. R. Baron's customers.

Senior Writer Weiss covered the A. R. Baron trial for BUSINESS WEEK

Who's behind the mouse?

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COMMENTARY

By Toddi Gutner

E-BONDS LEVEL THE TRADING FIELD

An electronic revolution is sweeping the bond market—one that could be as momentous as the Internet wave that is transforming the way we trade stocks. The \$13 trillion over-the-counter bond market is inefficient, with no required reporting of bids and offers. Fixed-income investors, both big and small, don't know by how much dealers are marking up bonds, so they don't know whether they're getting a good price. But now, as issuers, underwriters, and investors begin to embrace E-bond trading, all parties involved are sure to benefit.

Bond prices are affected by the trading relationships between the participants. Technology is lifting the veil that has long shrouded this clubby fixed-income world. Instead of calling around to several dealers to get a price on a bond, buyers and sellers in the most liquid markets can get real-time prices and execute trades without talking to a trader. "There is a collapsing of the distribution system and the middlemen are being squeezed out," says Jack Mahoney, a principal with Greenwich Associates, a consulting firm.

HOME TRADES. In mid-April, Ford Motor Credit Co. became the first company to sell commercial paper directly to institutional investors over the Internet. It's likely that General Motors Acceptance Corp. and Chrysler Financial Cos. will follow suit. Some municipalities are also issuing their debt directly to customers online.

The result? Lower transaction costs for institutions and individuals. Take TradeWeb LLC, an Internet-based electronic-trading system that allows institutional investors to trade Treasuries with top brokerage firms.

It recently saved one customer nearly \$1,000 on \$25 million worth of bonds that it was selling, says TradeWeb President James W. Toffey. That may not sound like much of a savings, but consider that \$200 billion worth of Treasuries are traded

kerTec set up shop. It's an online interdealer broker backed by several large brokerage firms, including Goldman, Sachs & Co and Merrill Lynch & Co. "Any institution that doesn't have Internet access as part of its fixed-income strategy will be missing a large chunk of business in the future," says Andy Nybo, research director at the Bond Market Assn.

NO STOPPING 'EM. A recent Greenwich Associates survey of the 500 biggest Treasury investors reports that 21% trade Treasuries electronically. That number is expected to jump to 50% in the next year.

While most of the changes are taking place on the institutional side, the retail market is also making headway. In the past year, E*Trade Group Inc. and Discover Brokerage Direct have made bond trading available. Cost savings vary, but E*Trade's markups of one-half to three-quarters of a percentage point are significantly less than the 1% to 3% for a discount or full-service broker. Since last October's launch of TreasuryDirect's electronic access, which allows the purchase of U.S. government debt via the Bureau of the Public Debt Web site (www.publicdebt.treas.gov), 40% of Treasury purchases are done electronically.

It's unlikely we will ever have the same price transparency and liquidity in bond trading that we have in stock trading. There are 11,000 individual U.S. stocks, as opposed to 4.5 million individual bond issues—ranging from huge treasuries to tiny municipalities. And the vast majority don't trade regularly. Still, E-bond trading can't do anything but help the world's largest financial market.

Toddi Gutner covers the bond market from New York.



The middlemen are being squeezed out of the once clubby bond market

daily. TradeWeb, which started in early 1998, reports a daily trading volume of \$2.5 billion, double what it was in January. "Dealers are forced to post more competitive prices because of the transparency, and that creates a tighter market," says Robert S. Kapito, vice-chairman of Blackrock, which manages \$80 billion in fixed-income assets.

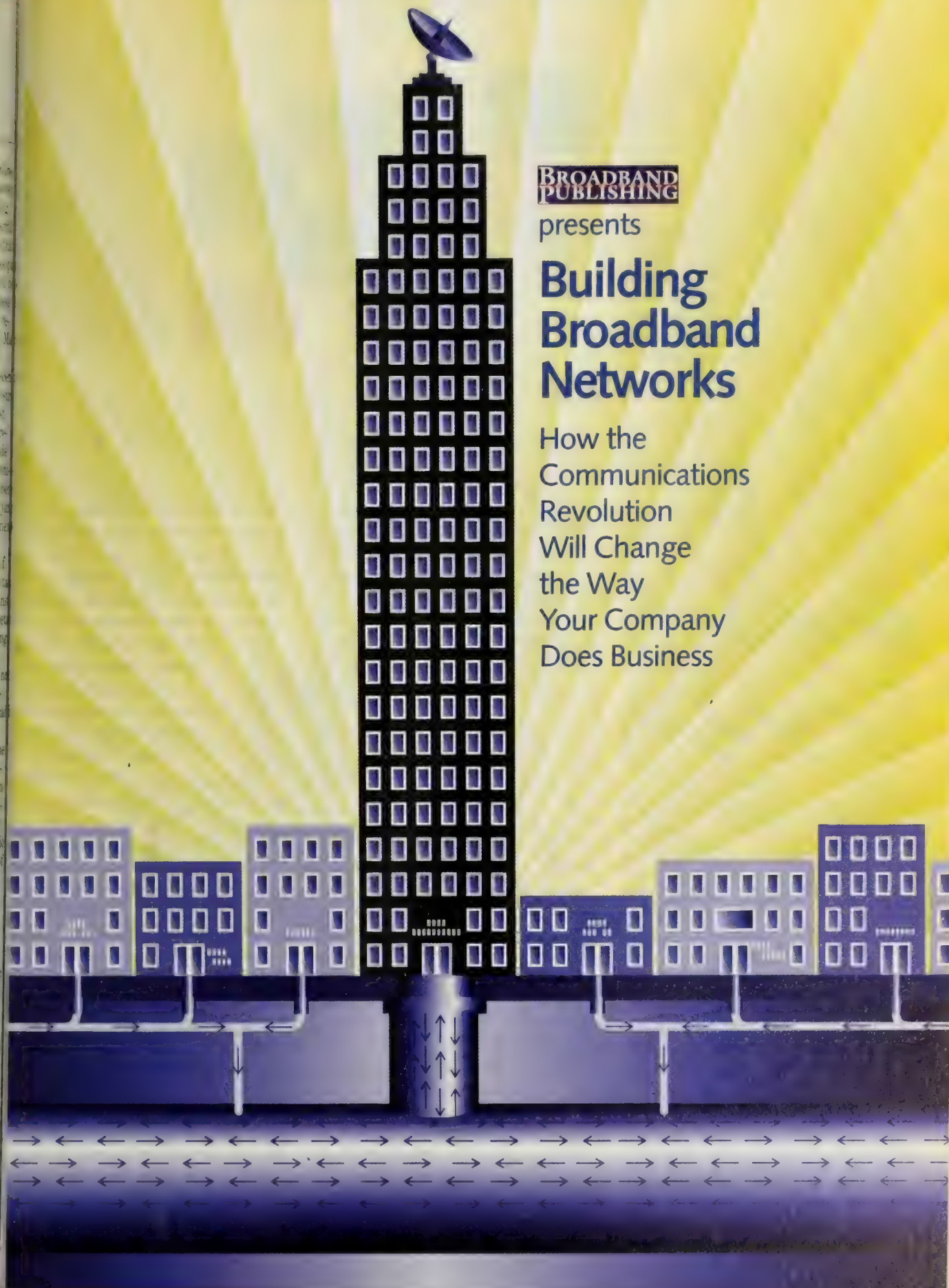
TradeWeb is just one of the nearly 30 institutional E-bond trading systems that have popped up over the past few years. On June 24, Bro-

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We did this to show you how real people at real companies, with real P&L responsibility, are putting broadband technologies to work.

We believe that's what corporate executives want to see before they commit their dollars.

We also invited Dr. John M. McQuillan, a recognized authority on the Internet and broadband technology, to write a detailed analysis of the impact of the emerging broadband Internet, and to comment on current trends in new technology ventures.

I think you will find the case studies that follow both instructive and useful.

Best Regards,

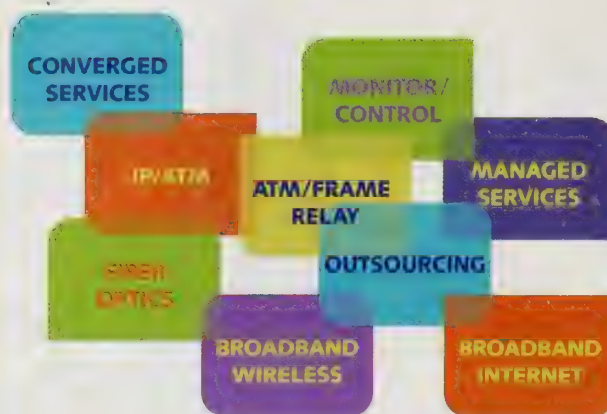
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**BUILDING
BLOCKS OF
THE NEW
BROADBAND
NETWORKS**

BROADBAND TUTORIAL

Broadband networks offer much greater 'bandwidth' than the older narrowband technologies. By bandwidth we mean the bit-rate, or number of bits per second that can be transmitted. The International Telecommunications Union (ITU) has defined a broadband connection as any rate higher than the standard rate, T-1.

SPEEDS & FEEDS. Bit rates come in increments called Kilobits (thousands), Megabits (millions) and Gigabits (billions) of bits per second. The fastest modems connecting a PC to the Internet operate at 56 Kbps (Kilobits per second), while a typical fiber-optic cable carries 2.5 Gbps (Gigabits per second). Here are some examples of typical narrowband rates:

- ▶ PC Modem = 56 Kbps
- ▶ Telephone call = 64 Kbps
- ▶ Basic ISDN line = 128 Kbps
- ▶ T-1 Leased Line = 1.5 Mbps

Narrowband communications normally operate over copper wires or coaxial cables. Broadband transmission technologies were intended to leverage the vast bandwidth of fiber optics. *The Optical Carrier (OC) hierarchy, is used to describe broadband rates:*

- ▶ OC-1 = 52 Mbps
- ▶ OC-3 = 155 Mbps
- ▶ OC-12 = 622 Mbps
- ▶ OC-48 = 2.5 Gbps
- ▶ OC-192 = 10 Gbps

Recent advances in optical transmission technology, known as Dense Wavelength Division Multiplexing (DWDM), promise dramatic increases in the capacity of a fiber

line. DWDM technology splits a beam of light into multiple colors, or wavelengths, each of which can operate at 10 Gbps. This technology is rapidly advancing, with the number of possible wavelengths exceeding 100 per fiber.

CIRCUITS VS. PACKETS. There are two fundamental types of networks, circuit and packet. The telephone network is circuit switched, while data networks, such as the Internet, are packet switched. When a telephone call is made, a live circuit is set up through the network, and a fixed amount of bandwidth, typically 64 Kbps, is reserved for the duration of the call.

Packet technology breaks data into small pieces, each containing an address. Sending a packet is much like mailing a letter; many envelopes of data enter the network at the same time, where they may travel over the same or different routes. Eventually, most of them arrive at the destination.

Packets are more efficient than circuits because a single line can carry multiple messages simultaneously. The problem is 'real-time' communications, like voice or video, doesn't work well on packet networks because there is no way to know when the packets will arrive or in what order.

Packet technology is improving, however, and it is only a matter of time before packet switched networks can support telephone calls, with an acceptable level of quality, at a fraction of the cost of a circuit switched call.

PRINT

Solutions for the Networked Economy

With the rise of the Internet, the networked economy is looming as both a major new revenue opportunity, and a major new technology/marketing challenge for businesses of sizes. From the corner mom-and-pop store to the global multinational corporation, the sales are accounting for a rapidly growing share of total revenues. Research projects the value of U.S. business-to-business e-commerce to be \$175 billion in 2001.

CONVERGE AND OUTSOURCE. This shift to the online economy has produced a need to employ employees, suppliers, and customers in highly productive ways. As a result, networked costs are consuming an increasing share of overall IT budget as well as IT resources. That is why management consultants are advising their corporate clients to converge and outsource as much of the network infrastructure as possible to focus on core business activities to achieve the company's business goals.

But that's easier said than done. Network managers typically just buy more circuits and bandwidth to support new applications.

As a result, many companies find themselves operating multiple networks — voice, IP, frame relay, and private line — all with their own set of communications links, support equipment, and management systems.

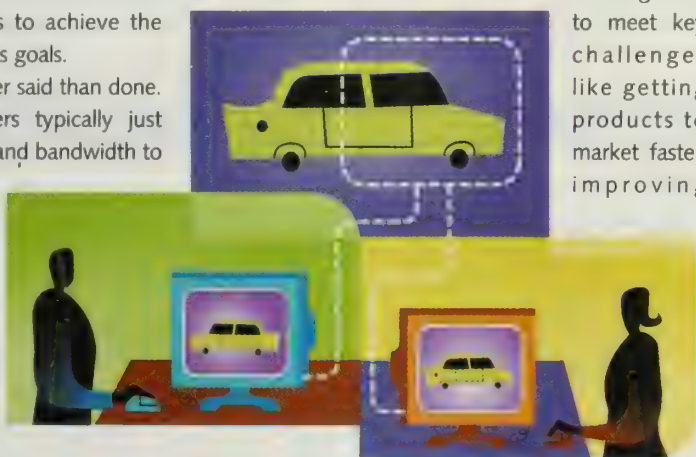
This duplication increases networking cost and complexity and wastes expensive bandwidth. The ability to provide integrated voice, data, video, and Internet services could reduce this administrative and network infrastructure management burden, lower capital and operating costs, and help level the playing field for even the smallest of operations.

"Convergence of voice, data, Internet, and video is the future of the corporate network," says Greg Gordon, director of Sprint ION marketing. "We offer a solution which will level the playing field of broadband connectivity for all stakeholders."

Sprint has invested \$2 billion dollars over the past year to develop Sprint IONSM, which can meet these needs and change the communications medium from an inhibitor to an enabler of business applications.

Designed to allow the complete integration of multiple services over a single network, and to deliver fully managed services to both business and residential customers, Sprint ION is arguably the most ambitious service concept ever proposed.

APPLICATIONS ENABLER. Sprint ION is also an applications enabler. Firms depend on specific applications to establish a competitive edge and to meet key challenges like getting products to market faster, improving



A manufacturing company can collaborate engineering development via white board sharing in real-time coast to coast.

customer service, and hiring and retaining workers. Imagine:

▶ A major oil company is trying to connect to a remote refinery for real-time production reports;

▶ A manufacturing company is trying to collaborate engineering development via white board sharing in real-time coast to coast;

▶ A textiles supplier is accessing one of the automaker's extranets to optimize their just-in-time inventory shipments to a plant.

Sprint ION allows applications like these to perform better and more reliably than ever before no matter where they're located.

BUSINESS BENEFIT

Improving productivity

COST OF OWNERSHIP. Total cost of WAN ownership falls into three main cost centers: transport and access, network management, and equipment and software. Users of Sprint ION could save up to 15% in the short term and up to 25% in the long term.

Since every site on the Sprint ION network has the ability to access advanced data and voice networking, there is network equality at every level of the organization.

Sprint ION

INTEGRATED ON-DEMAND NETWORK

Sprint will provide, manage, and maintain an integrated services hub at your locations. This hub consolidates communications from your computers, voice systems, and other equipment into a single cost-efficient, high-speed data stream for transmission over Sprint ION.

Using the desktop manager, Sprint ION users can activate, modify, monitor, control, and customize services allocating bandwidth dynamically when and where it's needed.

Sprint selected ATM switching for its core backbone network, which fully supports IP applications and services. Sprint ION represents the convergence of these two technologies by providing the application benefits of IP with the quality of service levels of ATM.

www.sprint.com/ion

AT&T SOLUTIONS

Maximizing Customer Service



When it comes to creating a competitive advantage the best course is to develop a strategy to serve and satisfy the customer. AT&T Corp., Basking Ridge, NJ, is a master at creating competitive advantage. For their corporate customers, the AT&T Solutions Managed Bandwidth Service (MBS) program provides the ultimate in effective, efficient customer service. AT&T Solutions is a networking professional services firm with expertise in managing corporate networks.

BUSINESS BENEFIT

Creating competitive advantage

"We architect, design, build, and manage corporate networks, and provide application oriented solutions that range from the WAN to the desktop," said AT&T Solutions' Ed Nalbandian, managing partner for Managed Networking Solutions.

When AT&T Solutions MBS was rolled out in May 1998, it enabled customers to transition from the older, narrowband TDM (time division multiplexing) to the newer Frame Relay and ATM (asynchronous transfer mode) broadband services.

MANAGING COMPLEXITY. Customers like IBM Business Recovery Services, a provider of disaster recovery services, rely on AT&T Solutions MBS to assure themselves instant ability to manage complex and immediate networking challenges. AT&T Solutions subscribes to the 'keep it simple' rule—building the core of its worldwide MBS network with products from a single, reliable vendor. This allows AT&T Solutions to assure a uniform level of service, as well as reduce costs.

That's why AT&T Solutions relies on the network delivery platform from Newbridge Networks as the mainstays of their MBS offering. A key feature of the Newbridge products is ATM multi-services capacity. The

result: a single managed solution capable of handling all corporate network voice, image, video, and data traffic.

UNDER NEW MANAGEMENT. AT&T Solutions is able to offer true managed services thanks in part to Newbridge's Global Services Management Platform.

"Newbridge is known for its sophisticated management platform," said Dean DeLitta, AT&T Solutions MBS product manager, who explained that Newbridge's strengths include a wide range of products supporting everything from T-1 multiplexing to OC-12 (622 Mbps) ATM backbones.

More important, all Newbridge devices can be managed under one system whereas other companies have different management systems for different products. "They had the best offer on the table—Newbridge was clearly ahead in this area," DeLitta pointed out.

SEEING EVERYTHING. "We manage networks with just about every vendor out

there," Nalbandian added. "At the end of the day, when it comes to caring for our customers' networks, we need to be able to design and manage a broad array of networking technologies and vendors."

AT&T Solutions sees all its customers, the time. Clients receive 24x7 monitoring and maintenance from sophisticated network management centers around the world.

AT&T Solutions MBS also gives users the flexibility to adjust bandwidth allocation, switch trunks from voice to data, re-route call volume based on time of day, or change network flow to meet disaster recovery needs.

MANAGING RISK. "We are investing a significant amount of money and talent into testing many solutions in our labs in order to stay current with technology," said Nalbandian. "The advantage for our clients is they don't have to commit huge resources to a certain technology, which could lock them into one path when everything could change 18 months down the road. We can offload much of the risk for our clients."

The bottom line is a win-win-win partnership between AT&T Solutions, Newbridge, and the clients, who gain effective, efficient customer service.

Newbridge Networks

GSMP

The Newbridge Global Services Management Platform (GSMP) is a fully managed and integrated set of networking products optimized to deliver advanced, standards-based global broadband services.

GSMP lets carriers like AT&T give thousands of corporate network customers a full, end-to-end view of their global networks encompassing private line, Frame Relay and ATM services. This includes key parameters such as configuration, network status, Service Level Agreement and performance reporting. Plus customers get visibility of their network resources down to the network node, card and port level through a Web-based interface. The range of products used by AT&T includes Newbridge's bandwidth managers, multiservice ATM switches, access switches, concentrators, and LAN service units.

Newbridge Networks, of Kanata, Ontario, Canada, designs, manufactures, markets, and services total networking solutions to organizations in more than 100 countries. Newbridge customers include the world's 350 largest telecommunications service providers and more than 10,000 corporations, government organizations, and other institutions. Founded in 1986, the company employs more than 6,000 people on five continents.

www.newbridge.com

OLSTEN STAFFING SERVICES AND 3COM

Building Business Networks



Olsten Staffing Services, a subsidiary of Olsten Corporation, is a world leader in staffing services, supporting business throughout the U.S., Canada, Europe, and Latin America. From clerical support to product assembly, accountants to technical staff, Olsten fulfills the supplemental staffing and employment needs of business, industry, and government.

RAPID GROWTH. Olsten Staffing began as one of the most successful companies do-in an entrepreneurial way, each of its branches operating independently with unique personnel and procedures. Faced with the challenges of rapid growth and global expansion, Olsten realized that an entirely new national network infrastructure was required to tie all of its businesses together.

Darin Prill, assistant vice president of IS Technology for Olsten, took the project to the next step, laying out the network structure and meeting with prospective service providers.

BUSINESS BENEFIT

Improving customer service

"We needed a network that will cost-effectively support the company for the next 10 to 20 years," said Prill. "With the reliability we could build into the solution, it made sense to go with AT&T."

BROADBAND SOLUTIONS. Over the last two years, Olsten has moved to a broadband solution that uses a combination of ATM (asynchronous transfer mode), Frame Relay, managed IP, and network access services.

This state-of-the-art network is designed in a hub and spoke configuration which enables direct communications between headquarters and more than 625 branch offices. Traffic flows over AT&T's high speed services network between the branches and Olsten's headquarters.

"An AT&T network solution provides us



Jim Harding

offices across the country and Canada.

TESTING THE WATERS. Olsten worked together with 3Com and AT&T Labs engineers to conduct an in-depth architecture test. "The AT&T Lab's test included Frame Relay to ATM service interworking and use of AT&T's ACCU-Ring® service for local access using 3Com's Pathbuilder S-600," said Prill. "The testing alleviated most of our concerns about 'will this work, will this function'."

BUILDING THE BUSINESS. "To be the best, we need good data, a good structure, good management, and a good network," said Jim Harding, Olsten Corporation's CIO. "Now, because our network is so stable and reliable, we can focus our attention on the business."

Olsten's Precise® system provides front-office functionality for skill evaluation, skill enhancement and custom matching. In addition, Olsten runs two applications as part of its Precise customer service component: Precise Payroll, using PeopleSoft and Precise Billing, using Oracle.

"Running these applications over the network has improved our efficiency, enabling us to improve accuracy with less headcount," said Harding. "Now, we enter data in real-time and keep all of our information in synch, greatly improving our ability to deliver services cost-effectively."

A DOUBLE PLAY. Unknown to Olsten at the time, 3Com Corporation was undergoing a similar process for its own internal network. Hoping to accomplish the move from multiple networks to a single global solution, 3Com was also moving to AT&T high speed services.

3Com had asked service providers to recommend a solution that would reduce costs,

with a redundant, reliable, cutting edge solution that is also cost-effective," said Prill. Instead of 30-40 narrowband T-1s, Olsten can use a single OC-3 (155 Mbps) to connect

increase the responsiveness of its global applications and incorporate applications that converged voice, data, and video.

"We looked to AT&T for several reasons, including its global reach and seamless service interworking," said Chuck Lankford, director of 3Com Network Services. 3Com sales offices are now connected using AT&T Frame Relay and ATM Services.

IMPROVED ACCURACY. Both companies are reaping the benefits of the move to ATM. For Olsten, the new network benefits both internal and external customers, improving Olsten's ability to match the right person with the right position at the right time, and to provide accurate and timely reporting and billing.

"Our solution is extremely flexible, enabling us to change as we need to. We are no longer prisoners of our network. Now more than ever, no one can do a better job than Olsten in the staffing industry," said Harding.

MULTI-MILLION DOLLAR SAVINGS. With the converged network, 3Com expects to realize multi-million dollar cost savings and dramatically improve both customer satisfaction and employee productivity. 3Com is converging the majority of its voice, video, and data traffic on one seamless network and will benefit from increased cost savings and the ability to provide numerous video applications to its sites around the globe.

AT&T

AT&T is a leading provider of data services, offering private line, frame relay, ISDN, ATM and IP services to more than 160 countries worldwide. AT&T serves more than 80 million customers, including consumers, businesses, and government. The company has annual revenues of more than \$52 billion and 110,000 employees.

AT&T runs the world's largest, most sophisticated communications network and is the leading provider of long-distance, data transport, and wireless services.

www.att.com

TECHNOLOGY ANALYSIS

by Dr. John M. McQuillan

What's Next for the Net?

Net technology and economics are improving so rapidly that the impact will extend far beyond the Web to transform telephony, PCs, and software.

How can we be so sure that the Net revolution will continue or accelerate? The key reason is that the three forces of supply, demand, and finance have all come together to completely change the economics of the Net. This is the most dramatic deflation ever seen in industry. We have access to rapidly expanding information and communication, at little or no cost.

TECHNOLOGY PUSH. First, technology push is creating new economics. It has become commonplace to note that Moore's Law means that chips are improving at a rate of 57% a year, doubling every 18 months. There are dozens of new chip vendors working to accelerate the Net; Intel just announced a major initiative in network processors. Switches and routers will be bigger, faster, and smarter. The pace of

time to respond to outages and traffic fluctuations. If there is a lot of traffic between two distant routers, optical switches can establish a direct light path between them, like establishing a non-stop airline route where once you needed to make a connection.

We are leaving the era of scarcity and entering the era of abundance.

The latest optical technology promises to send 160 different colors of light simultaneously on a single strand of optical fiber, each running at 10 gigabits/second (billions of bits per second). That's over one and half trillion bits a second, or more than the aggregate total of long distance telephony in the whole world, on a single strand of fiber.

Spurred by this discontinuity in technology, and by deregulation, more than 3,000 new service providers have been formed in the last three years. The largest of these, companies like Qwest, Level 3, Williams, IXC, Frontier, and others, are each building networks of 15,000 miles or more, with 20 or 40 or even 100 fibers in the conduit. The

capacity build-out extends to the undersea cables and low earth orbit satellites, making this a truly global phenomenon.

We are leaving the era of scarcity and entering the era of abundance. The traditional telephone companies were built on assumptions that are rapidly becoming outdated. The old phone model was free local calls and expensive usage charges for long distance. The Net model is a moderate access charge and no usage charges at all. Until

now, data has been a small percentage of traffic on the telephone net. Within a few years, voice will be just a small percentage of the traffic on the Net. Imagine that: telephony will become a legacy application.

CIRCUIT TO PACKET. The entire global communications infrastructure is shifting from circuit-switched to packet technologies, a shift even more dramatic than the shift from analog to digital because it threatens the survival of the established players. In the regulated world, carriers

saw their infrastructure as their key asset. In a deregulated environment, it can be a liability. A carrier that starts two years later can acquire optical technology that is four times as good. The same economics that have driven prices for PCs with multi-gigabyte drives down under \$1,000 are now transforming the way people communicate around the world.

EXPLOSION IN DEMAND. The second force is the explosion in demand. After 20 years of research in a research community, the Internet suddenly emerged as a commercial reality a few years ago. Nothing has been quite the same since. It is striking how much the Net affects people's daily lives. There are 100 million people using the Net, sending 3.4 billion e-mails a day in the U.S. alone, and looking at more than 400 million Web pages.

The evolution has been mind-boggling. Consider the rapid succession of problems and solutions. The Web appeared out of nowhere, but it was hard to find the right information. So entrepreneurs created search engines. These worked well, but indexing the Web was expensive. Then developers started portals, paid for by advertising. Dozens of companies leapt at the chance to add value to these portals with free e-mail, free stock quotes, news, weather, sports maps, directories, and all the rest. Now 40 million people have free e-mail accounts on the Web, up from zero in two years.

E-CHRISTMAS. 1998 was the first E-Christmas for retailers. Surfing the Web reveals all the dot-coms you might possibly

INTERNET DEMAND IS GROWING MUCH FASTER THAN TECHNOLOGY IMPROVEMENTS

BASIC TECHNOLOGY	PERFORMANCE DOUBLING TIME
Moore's Law – gates/chip	18 months, 59% per year
Optical Fiber – bps/fiber	12 months, 100% per year
Packet Switching – bps/\$	12 months, 100% per year
BASIC DEMAND	
Internet Users	12 months, 100% per year
Data Bits	7.5 months, 300% per year
Internet Core	4 months, 1,000% per year

improvement in the Net will speed up even more with the availability of standard silicon building blocks.

BROADBAND OPTICAL. Broadband optical and packet technologies are improving even faster, about 100% a year. The industry is packing twice as many bits per second on the same fiber-optic link every year, by sending twice as many colors of light simultaneously. This technology will be able to rebuild the basic configuration of the network in real-

of—books, music, clothing, autos, electronics, jobs, travel, real estate, gifts, listings, health, home furnishings—the goes on. These sites are growing to become virtual destinations for a virtual community of users, with clearly defined demographics that appeal to advertisers. Advertising in turn provides the funding for running these sites with targeted content, commerce transaction systems, user ratings, chat rooms, etc. The demand curve goes up and to the right.

The result of this explosion in demand is a doubling of traffic on the backbone of the Internet every 100 days, or growing ten-fold in a year. Traffic is a thousand times heavier than it was just three years ago. There are Web sites supporting an unheard-of 100 million page views per day.

CAPITAL MARKETS. This leads us to the driving force for change: the river of money pouring into the Net. The spectacular growth in demand has attracted the interest of the capital markets. Obviously, the Internet has become the dominant theme on Wall Street in 1999, and also for the venture capital and high-yield markets. By my estimate, VCs backed about 800 new firms building chips, software, equipment, services, and applications related to the Net, investing \$5 billion. The new carriers have access to even larger sums of money in the debt markets.

McQuillan Ventures



McQuillan Ventures provides investment and strategic advice to top entrepreneurs building great network

companies. The firm also organizes and chairs the programs for the annual Next Generation Networks and NGN Ventures conferences. Dr. John M. McQuillan is the pioneer of Internet routing, a prominent advisor to network startups, and an influential industry expert.

Money is pouring into the Net from many directions. Established phone companies are doing mega-mergers and acquisitions of cable companies. Media companies are buying portals. Spending for online ads has hit several billion dollars a year. The traditional equipment

The Net is the beginning of the end for the telephone system. You will place phone calls via a Web browser interface, allowing a mixed-media conversation, with voice and a shared data workspace. You will control your voice communications via a browser, establishing whose calls you take, at what times, and whether by office phone, cell phone, PC, voicemail, or pager.



IP Telephony and Streaming Media: Two examples of why traffic on the backbone of the Internet is doubling every 100 days, or growing ten-fold in a year.

vendors like Lucent, Nortel, Siemens, Ericsson, and Alcatel are spending billions a year to acquire startups. Cisco alone has acquired more than 30 companies. And the IPO window is open for the Net-CLECs, router and switch vendors. Internet software companies are going public at impressive valuations.

NET WINS. So, the Net has won. The naysayers point out that the Internet is not secure, reliable, or predictable, or ready for carrying mission-critical data. But that misses the point. The Net is the focus for the cream of high-tech talent. On top of that, it is dominating the attention of the capital markets. The Net is whatever tens of thousands of hard-working, well-funded, highly-motivated engineers can make it. Not only has the Internet protocol and technology won, but the Internet development process has won as well.

BEGINNING OF THE END. The impacts will be far-reaching. The Net is the beginning of the end for corporate telecommunications systems because it accelerates the trend to outsourcing. Just like many enterprises decided not to run their own voice networks, they will soon divest their modem pools, private line networks, voicemail, paging, fax, and e-mail.

The Net is the beginning of the end for the PC as the only way to work. The collapse in PC prices, first below \$1,000, and now below \$600 will lead to a new class of information appliances. There will be many varieties—hand-held, mobile, video-centric, music-centric, phone-centric, etc.

The Net threatens the entire PC model. Instead of buying and installing software on your PC you will use Web-resident tools that automatically load the right application into your browser. Instead of storing files and messages on a "personal" computer you will access them on the Net from various information devices.

Each year, more Net technology is available for free. Browsers are free. Web-based e-mail is free. Stock quotes are free. MP3 music is free. There is even a site offering free PCs (loaded with advertising). Free voicemail and fax is coming to the Net. The Net is the beginning of the end for traditional business models for software, services, and content.

The next decade will be the golden age of Net expansion, application development, and mass deployment. It is an exciting time—take advantage of it!

DELTA AIR LINES

Customer Service Soars



Any top-flight organization must constantly evaluate its business objectives and design technology initiatives aimed at achieving those goals. One of the ways Delta Air Lines is committed to delivering customer satisfaction and operational efficiency is through the effective use of broadband technology.

BETTER SERVICE. To maintain superior service to the traveling public, the leadership of Delta Air Lines set out to build the industry's fastest and most modern communications system. This meant reducing lines at gates, getting planes airborne on time, and delivering advanced applications to support field personnel.

"As part of our Global IT Renewal campaign, we evaluated numerous ways to achieve our goals," says Paul Millard, vice president of engineering for Delta Technology, Inc., Delta's wholly-owned information technology subsidiary. "We realized we needed a very high performance infrastructure to support emerging applications."

BUSINESS BENEFIT

Improving operations

Delta's initiatives include an aggressive rollout of multimedia applications—software programs used for training that incorporate sound and video—aimed at improving customer service. But the existing network infrastructure could not support these new applications. In addition, Delta wanted to explore the efficiencies of consolidating voice traffic for their reservation call centers onto their data network.

CONSOLIDATION. The airline was also trying to consolidate its technology base, explained Barry Lloyd, director of network engineering for Delta Technology. "We were supporting every networking technology and every vendor that existed," he said.

So Delta turned to FORE Systems, Inc.,

Pittsburgh, PA, to provide the world-class foundation for a new broadband network, including ATM (asynchronous transfer mode) and Ethernet switches.

WHY ATM? "We needed a long-term, scalable solution that could run all types of traffic on a common network so we could get the most leverage for our IT investment dollars," Millard said.

ATM is a broadband communications technology optimized for the convergence of data, voice, and video. ATM spans both local and long distance networks, and integrates seamlessly with many network technologies.



able to leverage its investment in existing networks while consolidating multiple technologies. "In addition to meeting all our requirements, FORE allowed us to go with a single vendor solution," added Lloyd. "This made things like support, training, and implementation much easier."

Since deployment began in 1998, Delta has built one of the nation's largest ATM networks, serving 26 airports, 11 reservation call centers, and the company's 22-building Atlanta campus.

The Atlanta headquarters campus network is comprised of more than 50 ForeRunner ASX-1000 ATM backbone switches, including six ASX-1000s which make up its 'Super Core'. The switches are connected with redundant OC-12 (622 Mbps) links for high performance and reliability. FORE's ES-3810 provides Ethernet LAN connectivity to desktop computers.

DEPENDABILITY. The new network supports reservation and ticketing services and carries all voice traffic between call centers. With such vital services riding on the network, the technology has to be absolutely dependable.

"Our networks cannot fail," said Lloyd. "Sooner or later something will break, so we had to be sure a failure will not occur at any location."

The ATM network is designed for 'high resilience,' Lloyd explained. The FORE Systems products are highly redundant, and all connections have multiple switches and connections into the network. "There are no single points of failure," he said. The initial impact of the new network has been eye opening.

COST REDUCTION. "We have seen a 30% reduction in cost per megabit by running applications on ATM instead of Frame Relay in our wide area network. Without ATM, monthly circuit costs would have gone through the roof," said Millard.

Future plans are to extend ATM even further, to provide integrated data, voice, and video to desktop computers. Delta is also planning to upgrade its Super Core with FORE's flagship product, the ForeRunner ASX-4000, an Internet-class ATM backbone switch, that would improve performance even further with OC-48 (2.5 Gbps) links.

As more advanced applications and operational efficiencies become possible, Delta will leverage its new broadband network to provide industry-leading customer service. And that will help keep the air carrier flying high.

FORE Systems

Here's a brief look at some ways the Delta Air Lines' network is used:

RESERVATIONS/TICKETING

The airport reservation/ticketing system processes more than 40 million transactions every day.

CAMPUS NETWORK

Delta's internal data network transports more than seven trillion bytes of information per day.

CALL CENTERS

The reservation call centers handle 50 million minutes of inbound voice traffic each month.

www.fore.com

TELIGENT

Broadband Without Backhoes

In today's Internet-centric world, the network is the business. Companies preparing to compete in the 21st century know their network is the key to landing new clients, and pricing them well at a reasonable cost.

BROADBAND WIRELESS. Broadband wireless access technology lets communications provider Teligent in Vienna, VA, bypass the copper wire challenges that face traditional voice providers, bring new services to an underserved market (small- and medium-sized businesses), and get right to the business delivering service, savings, and simplicity.

BUSINESS BENEFIT

Creating new services

"Our customers want the best in data technology and solutions to give them a competitive edge," says Kirby G. "Buddy" Pickle, president and chief operating officer of Teligent. "With the expected growth and demand of data services and e-commerce, Teligent required a seamless network to carry all types of traffic to serve our customer's needs today and tomorrow."

Teligent provides local, long-distance, high-speed data and Internet access services through its digital broadband SmartWave network. Serving 28 U.S. markets today, it has plans to expand to 74 by 2001. Teligent's customers, businesses with 10 to 350 phone lines, save up to 30% on services, and benefit from having one provider and one bill.

OPPORTUNITY TO MARKET. Nortel Networks is Teligent's preferred supplier and principal network integrator. In less than two years, Teligent went from an opportunity in 1997 to an operational company. As Teligent built its networks, the company incorporated Nortel Networks' Reunion broadband wireless access systems, network design and implementation capabilities.

"Because Nortel Networks is a data/voice communications company," Pickle says, "it helps Teligent offer customers a complete line of products and services."

BROADBAND BACKHOES. The former CEO of UUNet (a national Internet services provider), Pickle knew first-hand the frustration and delays of using copper lines to provide Internet access to customers. Worse, delivering fiber-optic services to buildings usually means backhoes digging trenches.

Teligent's deployment of digital fixed wireless networks bypasses existing local telco facilities. Broadband wireless acts like a fiber-optic cable in the sky, traveling the last mile to customer buildings over the heads of local telephone company monopolies. This provides small- and mid-sized businesses affordable access to high-speed communications, up to 45 megabits per second, previously available only to large corporations.

"Teligent's SmartWave technology built with Nortel Networks products is adaptable to the rest of the world, too," Pickle says. He anticipates entering the Latin American and Western European markets.

The key to Teligent's networking success is its ability to integrate advanced point-to-multipoint microwave networking with traditional broadband wireline technology. When a customer picks up a phone, accesses the Internet or initiates a videoconference, the signal travels through a Nortel Networks AccessNode terminal and a Reunion Network Interface Unit to an antenna on the rooftop of the customer's building. The antenna relays voice, data or video signals using the ATM (asynchronous transfer mode) protocol to a base station antenna.

At its base stations, Teligent has Reunion Network Node Equipment that aggregates signals from a number of customer buildings and routes them to a Teligent switching center. At the switching center, the Nortel Networks DMS and Passport switches route the voice and data to public networks and ISPs.

REVENUE CREATION. The opportunity facing Teligent is huge. The business communications market is expected to reach \$250 billion by 2007. Two-thirds of that market is made up of Teligent's target segment, small- and medium-sized companies. During 1999 the company plans to more than double the number of customer buildings covered to 5,000, grow its customer base to 10,000, and install more than 75,000 new lines.

"Because we're deploying SmartWave technology, we're able to move quickly and roll out service in 40 markets by year-end 1999," Pickle concludes. "And Nortel Networks has been vital in making this happen."

Nortel Networks

REUNION



Nortel Networks Reunion wireless products transmit high-speed multimedia content with rapid delivery for the 'last mile'.

Teligent's SmartWave networks built with Reunion's digital ATM-based technology handle voice, video and large data file transfers.

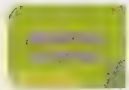
The Reunion portfolio includes base station equipment with multiple interfaces to wireline networks, wireless transmission and reception equipment, customer premises equipment and integrated network management. Value-added services, include business case analysis, network planning, installation, training, and support.

Nortel Networks Reunion solution integrates with other Nortel Networks elements, thus future-proofing customers' networks.

www.nortelnetworks.com

FLYING J

Growing Your Business Without Growing Your Costs



Well-run businesses are policy managed. A key to corporate success is the ability to implement and manage purchasing policies, hiring policies, even network bandwidth management policies.

COST MANAGEMENT. Until recently it was difficult for innovative companies like Flying J, Inc., Brigham City, UT to control broadband network use and validate service level agreements. WAN (wide area networking) costs hit the bottom line hard. They are pro-

BUSINESS BENEFIT

Improving resource utilization

jected to grow as much as 35% in just the next two years, so there is strong incentive to manage costs by monitoring applications which are heavy bandwidth users and by shaping network traffic based on business objectives.

Flying J is a fast-growing business with 121 full-service highway gas, service, and hospitality centers across the United States. The firm is adding 15 sites this year, with a goal of 20-30 new sites per year in the future. Just as they want to provide smooth traffic flows in their service centers, so they need to direct network traffic flow.

Top management made it clear that nothing could be done to Flying J's network which would compromise customer service at the travel plazas. "Credit card authorization will have priority over the internal business requirements" says Robyn Hunter, manager of the network services department. "Customer support is our main focus."

VERIFYING SERVICE LEVEL AGREEMENTS. She is impressed with ServicePoint's™ new ability to see problems before the network goes down. She is also better equipped to

verify service level agreements with their service provider. Leased lines are expensive because they are paid for whether or not fully used. Until now, Flying J had no way to check that availability guarantees were met or to check for under-used lines.

But Murphy's Law of Networking—applications selfishly expand to consume all available bandwidth—must be controlled. "We need to manage the cost of the network by keeping our providers to their SLA, have the visibility to control our bandwidth instead of adding additional T-1's that are not needed," says Hunter.

MONITOR & CONTROL. To gain control and set priority queuing on its network, Flying J standardized on the ADC Kentrox ServicePoint 2140 SDU (service delivery unit). It provides circuit termination and network monitoring at all levels. It is scalable, so it can grow as Flying J expands.

"The ServicePoint platform will provide the network control and policy management capability we need," says Todd Stott, Network Engineer. "Its best feature is the visibility it gives us into our network. Next is the traffic control it provides over all network aspects."

Flying J is completing a total upgrade of an outdated network. In addition to handling existing POS, data, and interstate voice calls, the new network will provide Internet access for service plaza customers, videoconferencing for management, and other futuristic applications.

BANDWIDTH OPTIMIZATION. The goal is to have 100% up-time on the network while cutting infrastructure costs. To do that, Flying J will deploy ServicePoint at every site. Units sit at the network gateways and enforce policies set up by management by identifying and classifying all network traffic. They apply bandwidth management to ensure important applications get priority.

Flying J wants to focus more on its core

businesses and less on technology. As they upgrade their network, the focus will be on cost control and bandwidth optimization. "If we can manage the price of bandwidth without hurting our POS transactions, we're ahead of the game," Stott says. "We're looking to ServicePoint as the key to maintaining those network standards."

ADC Kentrox

SERVICE DELIVERY PLATFORM

The ServicePoint Service Delivery Platform lets managers terminate, monitor and control (TMC) their wide area network (WAN). ServicePoint, from ADC Kentrox, Portland, OR, is a new class of WAN access device targeted at enterprise users and service providers.

Integrating Packeteer application monitoring and bandwidth management technologies, ServicePoint allows enterprise users to control use of their network bandwidth and provides application performance management capabilities, allowing users to take control of their WAN resources and costs. Service providers gain a platform for deployment of managed services, creating the opportunity for increased revenues and profits.

It provides T1 or sub-T1 termination, as well as end-to-end monitoring of frame relay circuits and control over their use. ServicePoint hardware and software lets management analyze and control network behavior. This is higher level intelligence: bandwidth management, traffic analysis, and classification.

ServicePoint application software includes easy-to-use reporting and element management software tools.

The bottom line: Delivering mission-critical application performance while controlling WAN resources and costs.

www.kentrox.com

IXC COMMUNICATIONS

Building a Business Class Internet

IXC Communications is a company with a mission—to build the Next Generation Internet. It knows that by starting with a clean slate and deploying the latest broadband technology, they can gain a strategic advantage over competition.

SHAPING THE NET. That's why the Austin, Texas-based IXC recently launched mini2000, a new, high-speed IP data network, which promises to reshape the Internet. The goal is to improve service quality by eliminating the congestion that currently plagues the Internet.

BUSINESS BENEFIT

Creating strategic advantage

According to Mark Lefebvre, vice president for data services engineering, IXC's goal is to run IP data packets directly over multi-terabit light waves on its 10,000-mile fiber network, dispensing with many layers of protocols and equipment. "The more hardware you eliminate, the more efficient and less costly the transport is going to be," he said.

BUSINESS CLASS SERVICE. Our goal is to create an Internet that can offer 'Business Class' services, Lefebvre explained, citing the example of Virtual Private Networks (VPNs), which provide all the benefits of private networks. "Legacy private networks could be replaced by VPNs for less than half of the cost," he estimated.

Why a new Internet? The problem with the present Internet is that there is no way to differentiate among users or applications. When the network becomes congested, everyone suffers. Corporate America will not accept the Internet as a replacement for private networks until those problems are fixed.

Routers are the 'traffic cops' of the Internet, but the current generation is too slow to keep up with the explosive growth.

The latest wave of gigabit routers use custom-designed integrated circuits to move packets with blinding speed. IXC will be testing such a device from Unisphere Solutions' Argon Networks.

SEARCH FOR SOLUTIONS. To make voice and data convergence a reality, a new Internet infrastructure is needed, one that supports differentiated services at the edge, with a new generation of fast routers at the core. This is the strategy of Unisphere Solutions, launched in March 1999, to focus on IP services. Three start-up firms form the cornerstone of Unisphere Solutions; Argon Networks, Redstone Communications, and Castle Networks.

FASTER ROUTERS. Argon Networks' strategy is to combine IP routing with ATM switching on the same platform to cover the two most important services in use today. Argon has also integrated fiber-optic interfaces directly on the platform to eliminate the need for an entire class of optical equipment. "The result is reduced capital expense and lower operating costs," said Mike Grady, president and CEO, Argon Networks.

DIFFERENTIATED SERVICES. Redstone Communications is developing a new type of IP router that will deliver differentiated services at the network edge, so that each customer can be treated uniquely. As Jim Dolce, founder and CEO of Redstone, points out, "The edge is the strategic position because it is where you can figure out who is important and who is not. It's that simple."

CIRCUIT/PACKET. Castle Networks is looking at a different problem, how to combine the circuit-switched technology of the global telephone system with packet-based Internet technology. Tom Burkardt, president and CEO, Castle Networks, is vividly aware that after 60 years of engineering effort the public switched telephone network will not be replaced anytime soon. "We are trying to change the model of the circuit switched world, by mediating between the old and the new with a product that supports both

circuits and packets on the same platform."

NEXT-GEN. Unisphere Solutions is determined to be a key supplier to both the traditional telephone companies and to the next-generation of service providers, like IXC, that are already beginning to impact the competitive landscape.

Unisphere Solutions



Martin Clague

"You have to be fast in this market, but you have to be sure."

Siemens A.G., sensing the need for a new level of thinking to meet the challenges posed by voice and data convergence, created a separate U.S. based entity, Unisphere Solutions.

The Unisphere mission is to be the top provider of next generation platforms for service providers around the world.

According to Martin Clague, president and CEO of Unisphere Solutions, Siemens made a bold move to create a separate company with a stock plan to attract new blood, and the power to make fast, local decisions.

"You have to be fast in this market, but you have to be sure," Clague explained, noting that the market is changing, and companies have to adapt. "Use of the technology is now at a different plane," he said. "Our customers want 'five nines' (99.999%) availability, not just best effort."

Clague summed it up by saying, "I want to do things in Web years. I want something new happening every three months, not every three years like a traditional company."

www.unispheresolutions.com

FUTURE TRENDS

by Dr. John M. McQuillan

New Ventures Drive the Net

If you want to know where the Net is going, you have to watch the venture-backed startups. The innovation comes from startups across the board—in chips, switches, routers, Web infrastructure, e-commerce software, and even the new generation of service providers. Increasingly, the real breakthroughs in performance, functionality, and business models, come from new ventures, who are defining the future landscape in the network business.

ACQUISITIONS. Consider the prices being paid to acquire networking ventures before they even have any significant revenue. In just the first half of 1999, nine pre-revenue networking ventures were acquired for more than \$240 million each, for an aggregate of \$3 billion: Argon, Assured Access, Castle, Epigram, Fibex, Lightera, Omnia, Redstone, Shasta. The acquirers include Cisco, Nortel, Siemens, and others.

Before this year, only one pre-revenue networking company had ever been sold for more than \$200 million. There has been a big uptick in the market value of network ventures, due in part to traditional vendors realizing they cannot afford to be left behind as the world shifts to IP.

What are some of the hot new areas we are pursuing at McQuillan Ventures?

CHIPS. At the bottom of the food chain are the chip companies. Network processor companies promise to shorten the time to market for vendors of switches, routers, traffic management devices, and Web and telephony equipment. These new chips provide both very high performance, often equivalent to a dozen Pentiums or more, and flexible programmability. Just like Intel creates much of the value in the PC world, these young vendors want to capture more of the value chain in networking.

SMART ROUTERS. The world of routers is changing. A few years ago, Cisco offered a

single model at the top of the line, for enterprises and service providers, for all different applications. Now startups have attacked Cisco on all sides, building lower-cost routers for enterprises and Web server farms, smarter routers for the edge where services are created, and faster routers for the core of the net where optical bandwidth is located.

OPTICAL SWITCHING. Optical networking is a huge initiative, with many startups working on the challenge of switching very large amounts of traffic optically. Investors are convinced that this revolution has only begun, and that optical communications will



Problem solving over the net will be dynamic and immediate. Help desks will be transformed.

eventually reach everywhere in the network, with multiple colors of light.

The SONET (Synchronous Optical Network) optical rings that are common in today's metropolitan areas were designed for an era when telephony dominated data traffic, so they use circuit-switching technology. Startups have targeted this market, bringing packet switching to the fiber rings, cutting costs by a factor of 5 or 10.

DSL/CABLE MODEMS. The first mile in network continues to be an important bottleneck. The major contenders are DSL (Digital Subscriber Line) for the telephone infrastructure, cable modems for the television infrastructure, and wireless and optical for other situations.

VPNS. Investors sense that the Internet will take over most of the functions of today's private data and voice networks. To succeed, virtual private networking startups must convince corporate customers that their products make the Internet secure, reliable, and predictable. The Net will soon be ready for mission-critical business traffic.

WEB TRAFFIC BUSTERS. The huge amount of e-commerce on the Net is stressing the Web infrastructure. New ventures are offering many different kinds of solutions. Web

switches and load balancers manage the traffic flowing to multi-server Web sites. Caches store the most-frequently accessed pages close to users, to cut down delays and reduce transmission costs.

There is a lot more to

be done here, to continue to scale the Web as e-commerce grows to be a trillion dollar market.

CONVERGENCE SOLUTIONS

One of the most exciting areas for new ventures is the convergence of the Internet and the public switched telephone

network (PSTN). Some startups are working on replacing traditional PSTN switches with modern packet-oriented switches. Another key challenge is transporting voice in packet form—some vendors are doing this across the core of the Net, while others are enabling integrated access on the first mile, the costliest segment.

The pace is picking up. The Net is changing daily. Startups are the change agents.

You can reach McQuillan Ventures at www.mcquillan.com

BY OTIS PORT

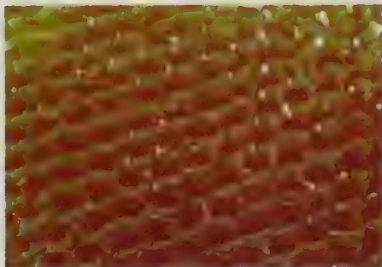
ITERIZED TO READ MRIs

RE COULD BE WORTH more than a thousand. With assistance from a computer, it might even save a life. Two researchers are teaching computers to analyze and interpret magnetic resonance imaging scans, so the electronic eyes can help discover ways to diagnose—

great—lung disease, and other illnesses. At Harvard University, Cardiology, an electrical engineer, has designed a database devoted to lung scans. A new patient's MRI is compared with images in the database. The computer finds the best match plus four as a way of helping the doctor diagnose the type of disease and rate its severity. The physician can pull up information on treatments and outcomes in similar cases. Additional scans are being assembled for liver, knee, and brain scans.

At the University of Massachusetts and Baystate Medical Center, researchers are working on a similar system for treating stroke victims. They hope to train their computers to spot clogged or ruptured arteries in the brain, which can cause one kind of stroke, and to estimate the severity of the trauma.

Machine-learning technology can be used to teach computers to become progressively better at understanding the hard-to-interpret results of MRI brain scans, and electronic systems could be even more valuable in patient care. The machines could turn up insights that could lead to improved procedures for minimizing brain damage, according to A. Bernard Pleet, Baystate's chairman of neurology. Stacey Higginbotham



HIGH TECH FROM THE HIVE

IF DUTCH RESEARCHERS have their way, a spoonful of honey won't just help the medicine go down—it will be the medicine. Scientists at the Netherlands Agricultural Research Organization, or DLO, were surprised when they found antifungal proteins in the nectar from the purple flowers of heather. Curious, they analyzed some commercial honey and found the proteins had passed undamaged through the honey bees and into their honey.

That sparked a major pro-

gram at the DLO's Center for Plant Breeding & Reproduction Research in Wageningen. A team led by biologist Tineke Creemers has rejiggered the genes of petunia flowers so they will yield medically useful proteins.

Next year, the group expects to harvest the first test product—petunia honey containing an antidiarrhea vaccine for puppies.

But that's just for starters. Creemers predicts that flowers and bees could provide a rich bounty of drugs. Each flower variety could be modified to add a specific protein or two to its nectar. Some nectar could yield honey with a particular antigen: Ingesting it would trigger the body to produce antibodies and build immunity. Other honeys could contain the active proteins of drugs for treating various diseases. The DLO says a few drugmakers are already buzzing around its Wageningen laboratory, eager to put bees to work. □

INNOVATIONS

■ Life is easy for some lab rats at MCP Hahnemann University in Philadelphia. When they're thirsty, they don't have to move a muscle to get a drink. Before, they had to press a lever, which triggered a robot arm that dispensed water. Now they just think about doing it, and an electrode in their brain picks up the signal that used to go to their muscles—and activates the arm directly. John K. Chapin, a professor of neurobiology at Hahnemann, hopes the technology will enable people to control artificial limbs by brain impulses alone.



■ The end of silicon's glory days has now been pegged: 2012. By then, a key element should get as tiny as it can be. Research at Lucent Technologies Inc.'s Bell Laboratories has determined that the insulating barrier in transistors can't work if it's less than four atoms thick. Today, the barrier is down to 25 atoms and shrinking steadily. At the current rate, chips will smack into physical limits in just a little more than a decade.

■ Testing new chemicals may soon become a lot less cruel to animals. In Vitro International in Irvine, Calif., expects approval for a test that relies on a gel of suspended collagen, the protein that gives skin its strength. The time it takes a chemical to eat through the gel indicates its potential to damage skin. The most caustic substances will no longer need to be tested on rabbits.

A MICROPUMP WITH BUBBLE POWER

NEED A TINY, ULTRARELIABLE PUMP FOR DISPENSING liquids drop by drop? Andrea Prosperetti, an engineering professor at Johns Hopkins University, figures he has just the ticket—a micropump with no moving mechanical parts to wear out or malfunction. Instead of valves that open and close, it uses tiny bubbles to push drops from a wee orifice.

Potential applications range from medical implants to so-called labs-on-a-chip for chemical analysis and drug discovery. For example, the micropump could end diabetics' need for daily injections of insulin. Equipped with a glucose sensor, an implanted pump could dispense insulin on demand, whenever the sensor detected rising levels of blood sugar.

Currently, Prosperetti and his team have a postage-stamp-size working prototype. It consists of a plastic tube, 1.6 millimeters in diameter, that is connected to a thinner tube by an even narrower "throat." When liquid in the tubes is heated by an electrical current to the boiling point, bubbles form in the throat. By the time a bubble collapses a fraction of a second later, it has moved about 1 mm into the 1.6-mm tube, pushing a tiny amount of fluid ahead of it. Next, the researchers plan to shrink the pump by a hundredfold or more, until it is smaller than a pinhead.

Evelyn L. Wright



BusinessWeek

THE 1999 CEO SUMMIT

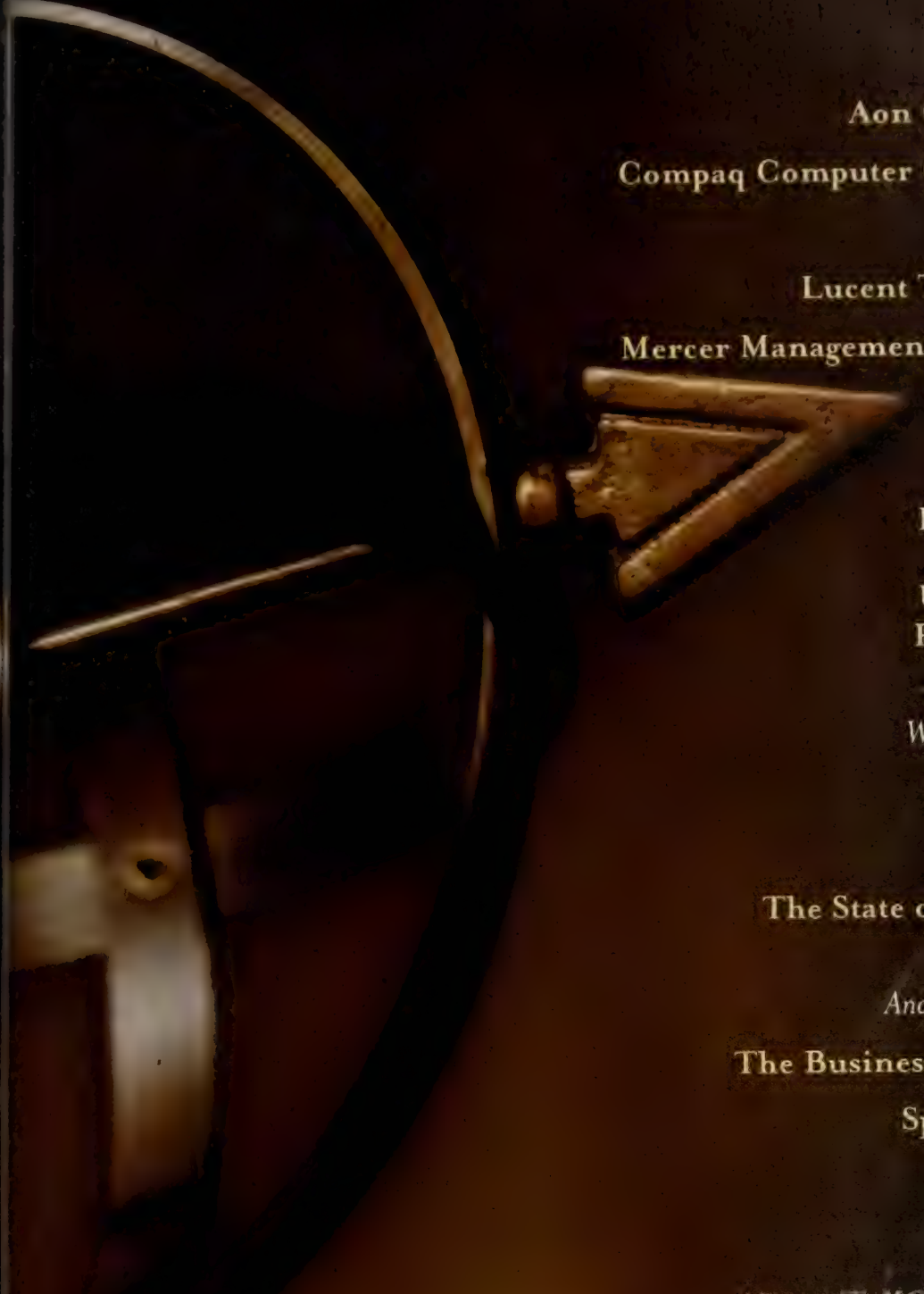
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On September 28, 1999, *Business Week* magazine will celebrate its 70th anniversary with a very special event in New York City. A select group of accomplished leaders from American business and politics will gather at The Waldorf-Astoria Hotel for a private, invitation-only meeting to consider the most important challenges facing American business at the turn of the millennium. This exclusive group will then be our guests at a gala dinner to celebrate 70 years of *Business Week* that evening at The New York Public Library.

The *Business Week* CEO Summit is an exclusive event reserved for the world's most eminent business leaders. This year's participants already include chief executives from: American Home Products Corporation; Archer Daniels Midland Company; The Black & Decker Corporation;





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If you have received an invitation, we urge you to RSVP today.

If you have not received one but believe you should attend, please contact us.

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BusinessWeek

More News. Less Noise. Worldwide.

E-COMMERCE

A HARD SELL ONLINE? GUESS AGAIN

Clothes, furniture, even food are starting to move

It used to be that when Katy Bremer wanted new furniture, her first thought was to jump in the car. And she would have gotten little argument from even the most ardent E-commerce fans on Wall Street. Some industries were made for the Internet and some weren't—or so the early wisdom went. Furniture? You can't try out a chair online. So why did the full-time mother from Villa Park, Calif., just buy a dining room set from FurnitureFind.com? "I was comfortable with the brand name and the price, and you get a lot of confidence in them from a customer service standpoint," Bremer says. Besides, she adds with a laugh, "you could just see the [store] salesmen grimace when I told them the price I got online."

Customers such as Bremer are helping chip away at one of the last blockades to E-commerce: the idea that some types of goods just can't be sold online. As recently as two years ago, even bullish analysts had a list of industries they thought would move to the Net slowly—or not at all. Now those industries are making a rush for dot.com gold.

ONETIME LAGGARDS. Today, new Web stores are far more likely to enter one-time laggard categories such as clothing and art—and less likely to sell Web staples such as CDs and books. More than 11% of online stores open less than a year sell mostly apparel. And new E-tailers are four times more likely to sell toys and almost twice as likely to offer art as stores that opened 12 months to 24 months ago, says Harry Wolhandler, vice-president for market research at ActivMedia Inc. in Peterborough, N. H.

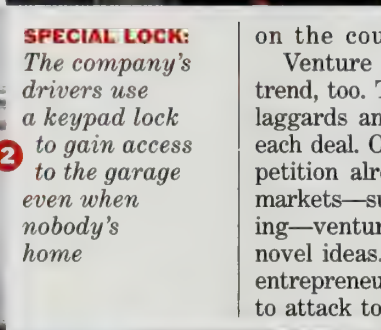
CODDLING THE CUSTOMER

HOUSE CALLS:
Streamline.com trucks deliver fresh food to homes on a convenient schedule



SPECIAL LOCK:
The company's drivers use a keypad lock to gain access to the garage even when nobody's home

STOCKING UP:
Driver Richard Piccini unloads groceries at the home of a Needham (Mass.) customer



WAITING FRIDGE:
He puts the food in a refrigerator that has been installed by Streamline.com in the garage



Even perishable groceries, furniture and car parts, named in August as three of the top "Internet challenges" in an influential 148-page report by Goldman, Sachs & Co., are heating up. Internet investors at CMGI are backing CarParts.com and Furniture.com, while Jupiter Communications thinks online grocers will claim \$1 billion in sales by 2002—only \$200 million less than projected online book sales.

What's changed? Not the problem of keeping food fresh while it's delivered to doorsteps around the

city. It's still tricky, tailored solutions can't be slipped into cyberspace, and art does anything look beautiful on a computer monitor? What's changed is the Net's growing audience and technologies and services that are helping entrepreneurs to overcome customer worries about being able to squeeze fruit, feel the fabric,

on the couch.

Venture capitalists are driving the trend, too. They're funding the so-called laggards and putting more money in each deal. One reason: With lots of competition already in once easy-to-access markets—such as books and stock trading—venture capitalists are looking for novel ideas. And larger financings give entrepreneurs the war chests they need to attack touch-and-feel issues. And

Busey, CEO of the new furniture site Living.com, spent some of his \$6.5 million in venture money on imaging systems so customers could see high-resolution pictures of products they can't touch. Now he's about to close on \$10 million more in venture capital.

One big boost to the trailing latecomers is broadening Web audiences.

There are far more women online today helping categories such as furniture and groceries where women make most of the buying decisions. Women now count for 46% of North American Internet users and 38% of online purchasers, up from 29% last year, says

Jerome Samson, director of technology and business strategy at Nielsen Media Research. If you look back a couple of years, what was available was hardware and software.

Stores use technology and aggressive service to offset customer worries about not being able to touch the goods

only consumers were white, and affluent," Samson says. The wider audience probably still isn't bite, though, unless the new Web-based stores ease the earlier fears. Consider Streamline.com Inc., a high-end crafts store in Madison, Wis., that made its name on the Web in March. Guild.com had to convince consumers that ceramics, jewelry, and other crafts offered were a good value. So he appointed the former head of Smithsonian Institution's Renwick Gallery to chair the panel that screens for the Web site. "Everything on the Web has been juried by someone in the past," says Marketing Vice-President John Anderson.

REAL MODEL. Clothiers are facing a similar problem-solving challenge. Catalog merchant End Inc. has developed a "virtual suit finder" feature to help women who don't want to try on each gear they can't try on. It allows consumers to pick a body type from an array of choices and recommends clothing likely to fit. A similar feature called the "personal model" helps customers size up other items based on their actual measurements, how broad your shoulders are. The result: End raked in \$61 million in online sales in its first fiscal year ended in May, up from \$18 million the year before. And growth is continuing. Its online sales grew 150% in the first year.

Online grocers have to make especially good accommodations. Everyone's goal is to find a way to distribute food cheaply enough to hold down or eliminate delivery charges and still make a profit. One of the Web grocers has quite figured it out yet. For example, Hand's HomeRuns Inc., the Somerville, Mass.-based grocer, needs 8,000 orders a week to break even. In a good week recently, it got 2,600, says HomeRuns.com President Tom Furber. Some grocers already have been forced to change their game plans. Skokie (Ill.)-based Peapod Inc. has stopped delivering groceries it used to purchase at regional supermarkets in favor of building

their own warehouses and buying in wholesale.

Streamline.com Inc. is losing money, too, but it's confident it now has a winning formula. Suburban Boston-based Streamline's strategy is to convince customers that they can get fresh food delivered on a convenient schedule by letting Streamline install a refrigerator in the consumer's garage. Streamline drivers use a keypad lock to make deliveries when the consumer isn't home. Still, Streamline's stock has dropped after its \$10 a share IPO on June 17, to about \$8 today.

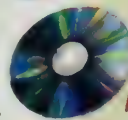
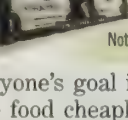
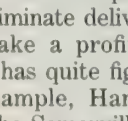
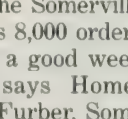
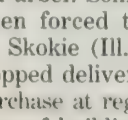
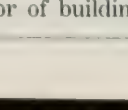
The problem is controlling Streamline's warehouse and delivery costs, which chewed up more than 100% of

against a backdrop of consumer acceptance," says Streamline CEO Timothy A. DeMello.

Hoping they have addressed their weak spots, the new online stores are selling the idea that their non-Web rivals are more vulnerable than analysts once thought. CEO Andrew L. Brooks of Worcester (Mass.)-based Furniture.com says analysts underestimated online furniture selling partly because they didn't understand how inconvenient regular stores are. And Furber says the meat HomeRuns.com delivers is actually fresher than a supermarket's because it has never sat out in a display rack. Now he just has to convince consumers.

Now for Sale on the Net: Art, Antiques, and Apparel

E-commerce is getting more diverse along with the Web audience. A bigger proportion of newly opened online stores are in categories that appeal to women.

CATEGORY	PERCENT OF ALL ONLINE STORES OPEN LESS THAN YEARS SPECIFIED		
	1 YR	2 YRS	3 YRS
 GIFTS/JEWELRY/FLOWERS/GREETINGS	17.3%	3.2%	11.9%
 HOBBIES/CRAFTS/ANTIQUES	16.5	12.8	12.6
 MEDICAL/LEGAL/OTHER SERVICES	12.2	5.6	6.0
 APPAREL/ACCESSORIES	11.5	5.6	11.9
 COMPUTER PRODUCTS/SOFTWARE	11.5	13.6	15.9
 CDs/TAPES/BOOKS	9.4	15.2	17.9
 TOYS/GAMES	6.5	1.6	4.0
 ART	2.9	1.6	1.3
 BANKING/FINANCE/INVESTMENT	2.9	1.6	6.6

DATA: ACTIVEMEDIA INC.

Note: Totals add up to more than 100% because some sites are in more than one category

WHIPSAWED. And that's the rub: None of the new, high-profile online merchants has proven it has a profitable business. Like other E-commerce players, they're putting up big sales growth on a small base and occasionally getting whipsawed by the stock market's changing moods. Even promising players such as Alloy Online Inc., a Generation Y clothing retailer, feel the pinch: Alloy went public at \$15 in May and is trading around \$11. On the other hand, despite Goldman's 1997 report calling toys a below-par online opportunity, eToys Inc.'s \$20-a-share price at its IPO in May spiked to \$85. One spur: eToys' annual sales jumped to \$30 million in the year ending in March, from \$687,000 the year before, even though the company lost \$29 million. The lead underwriter of that deal? None other than Goldman Sachs.

Despite early losses and fickle stock markets, it's all but certain that venture capitalists will let more E-stores that once seemed like dogs try to seize their day. "What's happening is complete euphoria," says Marc Singer, a vice-president at Brand Equity Ventures in Greenwich, Conn. "They're throwing money around fairly [crazily]." There seems to be no retail niche where E-commerce companies can't claim turf. The hard part will be executing well enough to deliver for customers—and for investors.

By Timothy J. Mullane in New York, with David Leonhardt in Chicago

the company's 1997 sales. Skeptics thought online grocers would never get order-picking and delivery cheap enough to allow them to make money. Still, Streamline.com's case suggests that fast sales growth could one day outstrip expenses. Sales have jumped from \$1.8 million in 1997 to \$2.5 million in just the first quarter of this year. That helped Streamline lower its warehousing and delivery costs to 47% of sales. Similarly, Peapod claims that it will be profitable in its key Chicago market by yearend because it has enough customers there to cover warehouse costs. "We've had business skepticism, but

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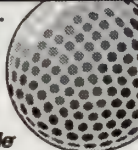
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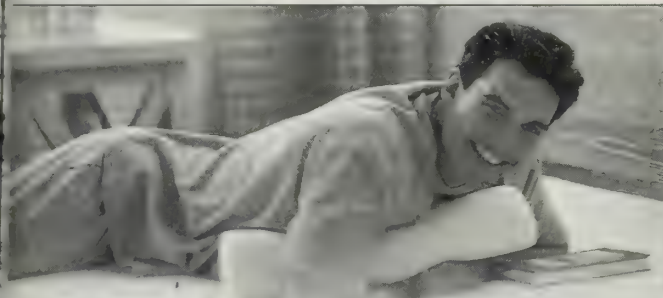
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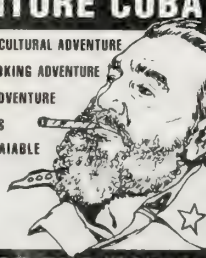
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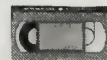
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The students were SIFE team members. SIFE (Students In Free Enterprise) sponsors student teams on more than 500 college campuses. SIFE provides students with what they can't get in a classroom — real life experience, working, living and breathing as entrepreneurs.

Judith Borck, President and CEO of Country Home Bakers, says: "SIFE has renewed my faith in young people. They accomplish so much in a short time and, more importantly, they make a real difference in their communities."

Len Roberts, President of Tandy

Corporation/RadioShack, says: "SIFE creates good salesmanship and teaches the students how to lead — something that is not taught anywhere."

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COMMENTARY

By Christopher Farrell

LOANS FOR COLLEGE DON'T HAVE TO CRUSH GRADS

today's economy, you can't get anywhere without a college degree. Just look at the numbers. Today's male and female college grads, respectively, earn a wage premium of 44% and 51% over those with only a high school diploma, according to the Economic Policy Institute. No wonder college enrollment is at an all-time high. But the flip side of the college coin is that a growing number of students are taking on significant financial burdens. In 1997-98, students borrowed \$36 billion in loans, more than double 10 years earlier, even after adjusting for inflation. Loans now make up 60% of financial aid, compared with 52% ten years ago. The current reliance on oversized loans is placing too much risk on college students,

forgiven for those with low lifetime earnings after 25 years, with taxpayers bearing the cost of loan forgiveness. The result: Low- and middle-income college students could be sure that they would not be stuck with loans that they could not pay off.

Right now such repayment schemes are available, but only to the limited number of students who borrow directly from the government. So the idea of income-contingent loans needs to be greatly extended to cover the broad range of public and private student loans. This will require gov-

A shift to income-contingent loans would take into account the growing reality that not all college graduates have equal earning power. Indeed, the incomes and wages of college-educated Americans have become more dispersed since 1970. Some graduates become social workers, while others become computer programmers or management consultants.

SIDESTEP THE PROBLEM. Moreover, income-contingent loans would be a way of lowering the barriers to college for low-income students. That's important, since the gaps in college entry by family income seem to have widened recently, according to Kane.

After adjusting for parental education and youth test scores, there remains a 15-percentage-point gap between the college enrollment rate of youth



of whom now start their work-lives deep in debt. That's not a problem for those graduates who go on to work in Silicon Valley or Wall Street, but the loan payments are a heavy burden for most everywhere else. Moreover, the prospect of living on heavy debt is particularly daunting for students from low-income families, who need the biggest loans and who do not have the safety net of parental resources to help out things go bad.

FORGIVEN. To make the college financing system less risky for students, what's needed is a broad shift "income contingent" student loans, where payments depend on income. Graduates in higher-salaried jobs could pay off their loans more quickly with bigger payments, while those in lower-salaried jobs would have much smaller payments that would be heavily subsidized by the taxpayer. Eventually, suggests Thomas Kane, a Harvard University economist, a chunk of the loan would be

To ease the burden, payments should depend on income

government guarantees to private lenders to cover the forgiveness of student debt after 25 years. Moreover, some government subsidies will be needed to hold down loan payments for the lowest-income borrowers.

Of course, income-contingent loans would make a banker shudder. Other consumer debts, such as car loans and home mortgages, do not alter the payment schedule when the value of the home or the car fluctuates, or when the income of the borrower changes. But education loans are an investment in a long-term productive asset—an educated worker. That makes it considerably more appropriate to link payments to the earnings of the graduate.

from the top family-income strata and those from the lowest earnings group.

To be sure, a poorly designed system of income-contingent loans can easily fall apart, if high-income borrowers feel taken advantage of. That's what happened when Yale University tried such a system in the 1970s, where high-income students effectively subsidized low-income students and people who defaulted. But a national system that ensured no one would pay more for their education than they would under the current fixed-payment system, while making up the shortfall from general government revenues, should avoid this problem.

More than ever, a college education is a productive investment—both for the individual and the economy. With a system of income-contingent loans, anyone who wants to go to college can—and that can only be good for society.

Farrell writes on economic and social issues from Minnesota.

Managed
equities,
economics,
and rugs

BusinessWeek Investor

Mutual-Fund Blues? Try a 'Wrap'

These accounts can hold off the taxman

BY JEFFREY M. LADERMAN

Moritza Day started investing in mutual funds a decade ago, accumulating a nest egg of nearly \$300,000. But the funds' unavoidable taxable distributions have always rankled Day, a CPA and president of Houston-based financial head-hunting firm Day West & Associates. "When you get those 1099s every January, it seems like you're getting hit with taxes on money you never see," says Day, who, like most fund shareholders, reinvests her distributions.

So this year, says Day, "I figured there has got to be a better way." Her answer: a separately managed account, often known as a "wrap." For one fee, wrap accounts combine the costs of investment counseling, portfolio management, brokerage commissions, and administration. Of course, you could get a similar result by investing in mutual funds with a financial adviser. What's different in Day's case is that her money is invested in individual stocks. She will pay capital-gains taxes only when she sells a stock at a profit, not when a mutual-fund manager unloads a holding bought long before she came to the fund. Day reckons that if she had a separately managed account last year, she would have netted \$10,000 more after taxes.

NEGOTIABLE. Day isn't the only investor switching from mutual funds to the separately managed format. While fund inflows are sagging (BW—June 28), the wrap business is booming. Total assets in managed accounts jumped from \$163 billion in 1996, to \$321 billion at the end of 1998, says the Money Management Institute. Some 30% of the assets are in wrap accounts that use mutual funds, but those don't offer the customization and tax efficiency of accounts comprising individual securities. Five giant firms—Merrill Lynch, Morgan Stanley Dean Witter, PaineWebber, Prudential Securities, and Salomon Smith Barney—hold about two-thirds of the wrap accounts. But increasingly, smaller brokerages and independent advisers

are offering the accounts, as well.

Wrap costs are dropping, making the accounts more competitive with mutual funds. In the early 1990s, wraps charged a steep 3% of assets annually, and that's still the list price at many brokerages. But rates are negotiable—and in any case, the more you invest, the lower the fee becomes (chart). Thanks to better software and portfolio management systems, investment managers who normally take institutional accounts in \$5 million chunks are also more willing to run wrap portfolios as small as \$100,000.

CHEMISTRY. Today's plumper portfolios are also prompting investors to seek help. "Something happens when the portfolio goes from five figures to six, or six figures to seven," says Steve Gresham of the Gresham Co., which advises firms serving affluent investors. "Even people who didn't seek advice before, usually seek advice now."

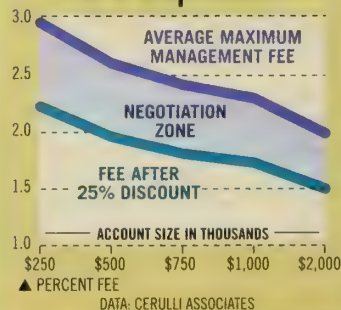
Not all asset-based fee programs are wraps. Big brokerage firms also charge annual asset-based fees as an alternative to charging commissions on each trade. Those are generally lower than wrap charges, and accounts don't offer the same services.

You will find wrap accounts under a slew of names, such as Merrill Lynch Consult, Schwab Managed Account Connection, and

But Cerulli Associates, a financial-services industry consultant, says all wrap programs have common characteristics (table). The focal point is the financial adviser or consultant. Choosing an adviser whom you can communicate easily is critical to the program's success. "Experience shows client satisfaction largely depends on the adviser," says William Turchyn, chief operating officer at Furman Capital Management, which manages about 5,000 wrap portfolios.

Investing

What You Should Pay For a Wrap Account





has taken profits in about 5 of his 26 stocks since January, and those will be taxable unless he has offsetting losses. Even so, "I'd rather pay taxes on my gains than someone else's," says Brooks, who like Day was bothered by mutual-fund distributions.

The other advantage with a separate account is that you can request tax-related trading. If you have a large profit outside the wrap account, you can ask your portfolio manager to take losses to offset the gain. Likewise, if you have other losses, you can ask a portfolio manager to take selective gains.

A separate wrap account can meet other needs that mutual funds can't. That's what financial adviser Lynn Mathre, president of Asset Management Advisors in Houston, has found. She has clients who are Compaq Computer Corp. executives, with substantial holdings in their company's stock, which they can't or don't wish to sell. To offset that risk, Mathre asks her wrap-account portfolio managers not to invest in Compaq and to tread lightly in the computer sector, as well. "You can't do that with a mutual fund," she says.

HANG ON. Moving from stocks or mutual funds into a wrap program can be tricky. If your portfolio includes stocks or funds that have ballooned in value, selling them in one swoop can trigger a large capital gain—just what you are trying to avoid. Advisers may work out a plan to liquidate holdings over time so as to minimize the tax impact and shift the cash to investment managers to start anew. Some firms will take a portfolio of securities or funds and do that for you.

What's Inside the Wrapper?

CLIENT PROFILING Adviser conducts a thorough assessment of your financial status, investment objectives, time horizon, and risk tolerance.

ASSET ALLOCATION Investment consultants evaluate profile and, with your approval, allocate the dollars to the appropriate investment managers.

MONITORING Consultants track portfolio performance, reporting to adviser and client on a regular basis, usually quarterly. Allocation may be shifted depending on your needs or market conditions.

ASSET-BASED FEES Your cost is an all-in-one fee that covers all the services. The fee can be as high as 3% but drops with the size of the account and through rampant discounting.

DATA CERULLI ASSOCIATES, BUSINESS WEEK

wrap adviser will assess your risk tolerance and investment goals. Asset-allocation specifics in the brokerage's support group, such as on Smith Barney Consulting Group or Wood Financial Services for independents, fit your profile. The adviser will recommend asset allocation and one or more investment managers to implement it. The support organization monitors your portfolio and through the adviser may suggest adjustments.

TAX-LIABILIZED. While potential tax savings make separately managed accounts attractive, the programs are not tax dodges. If you have a taxable account, you will get hit with a capital-gains liability if your manager sells a security at a profit, which you hope happens. David Brooks, an Indianapolis roofing contractor, says his manager

You don't have to kiss all your mutual funds goodbye. Some advisers suggest investors hold on to global funds, since they're often the best way to put foreign investments in your portfolio. And funds you already have in an individual retirement account or similar plan may not need to be moved. The account is sheltered from taxes, so distributions won't swell the tax bill. But if you want a customized investment approach and worry about getting slammed with taxes, wrap accounts make a compelling alternative. □

Unveiling the Secrets Of the CPI

The first in a series on market-moving numbers

BY KATHLEEN
MADIGAN

To the uninitiated, the words and acronyms make as much sense as the lyrics to the 1963 song Louie, Louie. Seasonal adjustment. Fixed-weight price deflator. GDP, CPI, NAPM. Yet the ingredients of this alphabet soup play a critical role in financial market volatility. To help readers become better investors, we are starting an occasional series of stories that explain the major pieces of economic data that can roil stock and bond markets. This week, we look at the CPI—short for consumer price index.

When the Bureau of Labor Statistics (BLS) reported on May 14 that the consumer price index jumped a sharp 0.7% in April, it underscored the importance of low inflation to financial markets. Worries over rising inflation sent the Dow Jones industrial average tumbling 194 points and pushed long-term Treasury bond yields to a 12-month high of 5.92%. It was the unexpected jump in the April CPI that began the anticipation of a Federal Reserve rate hike on June 30.

UNEXPECTED JUMP. For the markets, the problem is not high inflation per se, but unexpectedly high inflation, says Nomura Securities Chief Economist David Resler. "High unexpected inflation is a wealth transfer from lenders to borrowers," he says, because the money paid back to lenders buys less and less over time. In addition, inflation determines long-term interest rates, which are embedded in future earnings expectations. Guess wrong on inflation, and you might overpay for a stock.

The government tracks inflation in various forms (table). For instance, the producer price index (PPI) captures



changes in prices charged by U.S. producers. But it ignores inflation among service companies. The employment cost index totals up what businesses pay in wages and benefits. For the best inflation reading ever, markets look to the CPI. It is the comprehensive indicator because it covers goods and services purchased by households. It's the timeliest because the report is not quarterly, as is the ECI, but about two weeks after the end of each month. The CPI includes sales and excise taxes. But tax price hikes are less of a concern, since they require government action, not price pressure on the economy.

The CPI is not perfect. The elderly claim that the CPI, although used for adjusting Social Security checks, misses price hikes on drugs. Increases in property taxes show up only when the BLS calculates rents. And if your employer increases your health-insurance payments, the CPI won't reflect it.

The BLS counters that the consumer price index's aim is to measure prices for a specific basket of goods and services that the average household buys, according to surveys done from 1982 to 1995. This set basket leads to the biggest flaw on the CPI: It does not allow for substitution. Say, a drought in Washington means a price hike for Red Delicious apples. Consumers might switch to cheaper Granny Smiths. But the CPI would give more weight to the price of Red Delicious apples.

FOOD PRICES. When you watch the CPI, you should focus, as economists do, on the core CPI, which excludes volatile food and energy prices. Doing so gives you the best evidence of whether prices are responding to economic activity. Swings in food prices often say more about weather conditions in the Farm Belt, while energy prices track shifts in OPEC policy. In fact, a 0.4% rise in the April core CPI rattled the

Inflation Gauges

CONSUMER PRICE INDEX

MONTHLY Measures what consumers pay for all goods and services. Includes most taxes and imports. Since the CPI measures a set basket of items, it doesn't allow for substitution.

PERSONAL CONSUMPTION EXPENDITURE DEFULATOR

MONTHLY Federal Reserve Chairman Alan Greenspan favors the PCE deflator over the CPI. That's partly because it registers the substitution of a cheaper good for one with a price hike—say, if you bought cheaper chicken in place of pricier beef.

PRODUCER PRICE INDEX

MONTHLY Captures swings in prices that U.S. producers are actually charging their customers. Doesn't include many services, imports, or taxes.

EMPLOYMENT COST INDEX

QUARTERLY Measures changes in wages, salaries, and benefits paid by businesses. It tells the markets if businesses are getting squeezed by higher labor costs, which are bad for profits.



BLS did not include cellular phones in the consumer price index until 1998.

John S. Greenlees, assistant commissioner for consumer prices and price indexes, responds that cellular phones posed a specific problem: They did not fit into any category. Said Greenlees: "They weren't long distance, and they weren't a home furnishing," which is where home phones show up. Greenlees says the BLS is better at adding a new item that supplants an existing one, say, a new car model.

DREAM INDEX. Quality adjustment is another problem. How does the BLS account for air bags in cars, which add costs but save lives? This problem is especially acute in medical care. The Boskin Commission, set up in 1996 to examine the consumer price index, highlighted these problems and more.

Kenneth V. Dalton, associate commissioner for prices and living conditions, says the BLS was working hard to fix them even before the Boskin report. Economists applaud the efforts so far. But Dalton would like to intensify efforts to improve the CPI's quality-adjustment process. This wish list, of course, depends on unlimited funds. But the BLS recognizes that its monthly budget can buy only so much. Which, in a way, is one of the lessons of the CPI, as well. □

The BLS is better at updating items than adding new ones to its CPI basket of goods

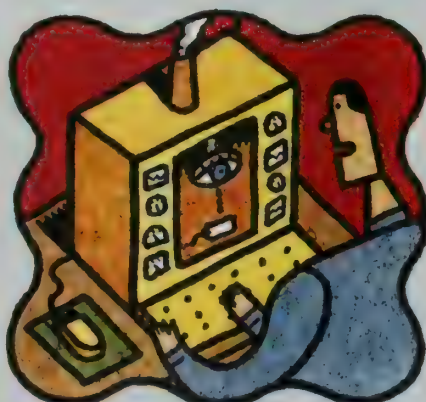
much as the 0.7% spike in the index

mid-1990s, economists criticized the CPI estimating inflation. Even Fed Chairman Greenspan viewed it as flawed. For one thing, economists, the BLS took too long to introduce new products, and thus the CPI failed to reflect the price reductions that take place in the years of a product's lifetime. Cell phones, for instance, were costly to use when they were introduced in the 1980s. But competition brought rates down rapidly. However, the

THE DISMAL SCIENCE ONLINE

From government statistics to pundits' opinions, the Internet is a wellspring of free resources for novice and expert economists alike. Dip your toe into the water at economics.about.com. It's run by a Massachusetts Institute of Technology economics PhD candidate, John S. Irons, and is chock-full of data, forecasts, and articles. At [WebEc](http://www.helsinki.fi/WebEc) (www.helsinki.fi/WebEc), meanwhile, you'll find a virtual reference library of hundreds of links to economics, finance, and central bank websites.

When there's Dismal Scientist (www.dismal.com). It so captivated me that I spent an hour browsing it. The user-friendly site has a terrific home page, with 15 timely economics stories. You can have economic statistics E-mailed to you as they're released, and the message boards host



lively discussions—the weaknesses of global capitalism is one recent thread. A popular feature for folks in the market for a home ranks U.S. states or metropolitan areas by gross product, income, inflation, or real estate values.

If you want to see what the pros

are saying about the Federal Reserve or the world economy, go to Morgan Stanley Dean Witter's site (www.ms.com/gef.html) for the musings of U.S. economic strategist Stephen Roach and his colleagues in Europe and Asia. But for economics with attitude, check out Deutsche Bank Securities economist Edward Yardeni at www.yardeni.com. While his latest postings are reserved for Deutsche clients, there are plenty of recent statistics, charts, and archived articles for free. In the Y2K Reporter section, Yardeni dishes out his gloomy take on the millennium. Y2K is "bound to disrupt the entire global economy," he writes, adding that there's a 70% chance of worldwide recession as severe as the devastating one of 1973-74. They don't call it the dismal science for nothing.

Joan Warner

A Bull Market In Navajo Rugs

The disappearing art commands record prices



BY KERRY HANNON

The gavel had just dropped on Lot 1, David Roche, Sotheby's American Indian specialist, was ecstatic. A 200-year-old Navajo blanket made for a child had fetched hands for a record-setting \$76,750, more than triple Sotheby's \$25,000 initial estimate. At the end on May 26, the New York auction house sold 480 lots for nearly \$2.5 million, making it one of the most successful Southwestern art auctions in years. A day earlier, Sotheby's Christie's had a similar experience, landing \$1.2 million for Navajo rugs and blankets that far exceeded presale estimates. "Demand for American Indian art remains high," says Roche. "Interest in Navajo textiles, in particular, has snowballed."

Indeed, demand for Navajo weaving is at its most intense since the Southwestern art boom of the 1970s. Prices are up 30% since that time, and say they have climbed at a similar rate in the past year. Collectors are moving in as they realize Navajo weaving is a disappearing art form.

WHITEHORSE:
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old, traditional weavings are simply not available unless a private collector decides to "sell," says Kathleen Foutz, co-owner of the 94-year-old Teec Nos Pos Trading Post in Teec Nos Pos, Ariz., near the New Mexico border.

Moreover, the number of Navajo weavers has been declining steadily for the past decade, leading to a scarcity of contemporary pieces. For the younger, more worldly generation of Navajos, weaving is their elders' craft. In a high-tech world, sitting at a loom for hours creating intricate, eye-straining patterns holds little appeal. "While the quality of contemporary weaving has never been better, the quantity is clearly waning as weavers retire or die," says Foutz. "I have lost 30% of my weavers this year alone," adds her cousin, Jed Foutz, who operates the Shiprock Trading Company in Shiprock, N.M.

Whether you're buying an older piece or contemporary work from the 1960s on, the first rule is to

sign you like (table). A plain pattern is worth as much, if not more, than a more elaborate creation if the weaving is of better quality. Rugs have a tight, even and symmetrical design. Edges are straight, not curled; corners square, and centers centered.

FREE. The best source for modern textiles are the trading posts on or near 6-million-acre reservation that spans Colorado, New Mexico, and Utah, and Native American galleries in various cities. Typical markups are double what you get, and there's little room for negotiation. Auction houses specialize in older rugs and tack on a 15% commission.

weavings exhibit 16 regional styles, developed around trading posts starting in the 1800s. The early weavings were blanch people wore as a sign of wealth. As the Navajo people have become mobile, genres have blended. Some styles include:

Los Pos and Red Mesa: Almost Oriental in appearance, these weavings feature intricate multicolored designs and several borders. They might include serrated diamonds or patterns that resemble lightning bolts. Triangles, and hooked figures often seem to float on a tan and gray backgrounds.

Grey Hills and Ganado Red: Two Grey Hill weavings are geometric in design and subtle color, as the weavers preferred the grays, and whites of undyed wool. Ganado weavings are similar, though they add crimson to the palette.

Painting: These are copied from the sand designs of Navajo medicine men, or shamans, drawn around as part of their healing rituals. Weavers create these rugs because the designs are considered taboo. Those who do often are considered medicine men to perform a ceremony before and after the rug is woven to

A Shopper's Guide

► Choose a tight, smooth weave. A loose weave is easier and faster to execute and doesn't have the same artistic value.

► Look for evenness and symmetry of design. Eyeball the piece for straight edges, square corners, and centered patterns.

► Pick a design that is pleasing to you. Some people like elaborate patterns with multiple colors, but a plain one can be worth just as much if the weave is intricate.

► Figure the median price for a high-quality standard-size (3-foot by 5-foot) contemporary rug is \$1,000 to \$3,500.

fore and after the rug is woven to protect against blindness. The rugs are elaborate and time-consuming to create. Also, the weaver has to bear the additional cost of paying the shaman to bless their passage. As a result, works inspired by sand paintings often command lofty prices.

■ **The Tree of Life:** This is the most common of the scenic pictorial rugs. The design, which first appeared around 1900, shows birds perched on cornstalks and trees growing out of a Navajo basket.

ANONYMOUS ARTISTS. Unlike other art forms, where the artist is identified, Navajo women rarely sign their creations. So it takes an expert to recognize the mark of a particular artist. A handful of contemporary Navajo weavers stand out, though. One is 73-year-old Lucy Whitehorse,

who lives near Teec Nos Pos and produces rugs that are at least 9-feet by 12-feet and sell for \$30,000 each or more. Mary Redhouse, 89, began weaving at age 13 and is still at it. She sold her first rug for \$13. Today, people pay thousands of dollars for her pieces.

Among smaller works, says Kathleen Foutz, a good-quality contemporary 3-foot by 5-foot rug, woven with commercial wool, typically runs from \$1,000 to \$3,500. "Compared to modern art, Native American weavings are still a bargain," says John Krena, owner of Four Winds Gallery in Pittsburgh and Sarasota, Fla. But as the number of Navajo weavers dwindles, those attractive bargains seem destined to fade away.



BOOKS ON NAVAJO ART

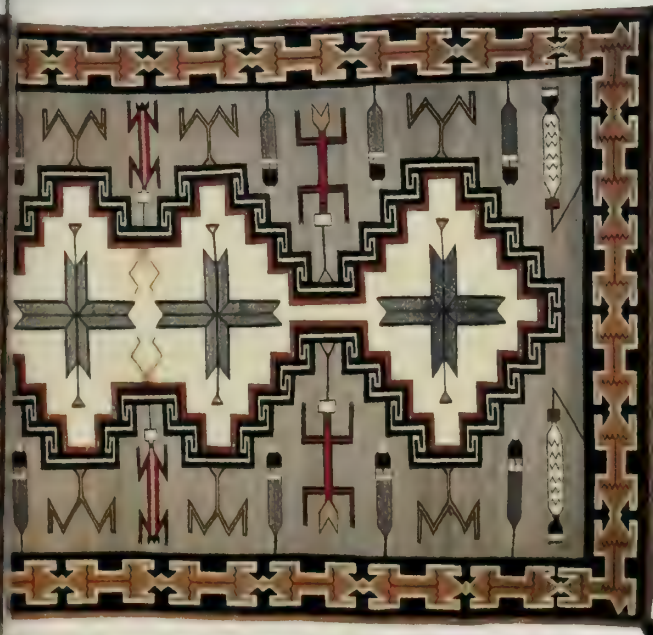
A Guide to Navajo Weaving by Kent McManis and Robert Jeffries, Treasure Chest Books, Tucson, \$9.95.

Navajo Weaving Way: The Path from Fleece to Rug by Noel Bennett and Tiana BigHorse, Interweave Press, Loveland, Colo., \$19.95.

Weaving a World: Textiles and the Navajo Way of Seeing by Roseann S. Willink and Paul G. Zolbrod, Museum of New Mexico Press, Santa Fe, \$29.95.

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A STRATEGY THAT'S BUILT TO LAST



BY ROBERT BARKER

What you can learn from Lehman Brothers' half-century record of beating the stock market with its "10 Uncommon Values" strategy

Professors of finance and others in the growing class of people who are smarter than I am, had driven me nearly to submission with their insistence that trying to beat the market is a sucker's bet. Then I heard about a bravura show of stockpicking by one of Wall Street's oldest names, Lehman Brothers. Its annual choice of "10 Uncommon Values" just ended its first 50 years way ahead of the Standard & Poor's 500-stock index. By Lehman's count, it beat the market by an annual average of 7.5 percentage points.

Mirage? Miracle? Or is it "a freak of nature?" as the firm's director of global equity research, Joseph Amato jokes. "It's very impressive," says Vanguard Group Senior Chairman John Bogle, a hawk on this stuff. "But I'd wonder if it's real." Lehman's account doesn't subtract costs, such as taxes and fees, that eat into returns, Bogle notes. Nor does it add dividends, which could narrow its lead.

True, all true, and if anyone offers you one of the unit trusts or other investments based on Lehman's picks, look hard at the fees: If you have less than \$100,000, expect to pay 2.75% the first year and another 1.75% each following year as the portfolio turns over. That's not cheap.

Yet Lehman's picks since 1949 beat the S&P in 37 of the 50 years. Often, they did so by a lot, while the underperforming years were more muted (chart). The market would have lost you money 14 years over the span; Lehman would have left you in the red 11 times.

All this tells me Lehman is on to something. Exactly what it's doing right is harder to pin

down, if only because any record of how it made most of its 500 picks is locked away in a warehouse in New Jersey. Lately, the process has been passed along by oral tradition. It operates this way: Each May, Lehman's stock analysts begin filing past an investment policy committee. They pitch the single stock they think will rise most in the 12 months ending July 1. By mid-June, the committee votes on the 10 best. The firm unveils its list before the market opens on July 1.

LOTS OF LIQUIDITY. Sure, there are some caveats. Lehman checks that its picks trade well in terms of liquidity, for one. But pretty much, there's no diversification by industry. No conscientious contrarianism. No tilt toward growth or cyclical or consumer stocks. No heroic bets on rates, growth or currencies. No computer algorithms to render an "optimal" portfolio. It's the stuff, in short, that so many active investors seem never to get enough of. "Just good old-fashioned stockpicking, completely unadorned by any macro overview," says Applegate, Lehman's chief investment

manager and the company's chairman.

What should you make of this? Maybe just the simplicity of the strategy. "The beauty of stocks is their simplicity," Bogle says. "It's going about it the simple way, with less statistics, numbers and such, of which

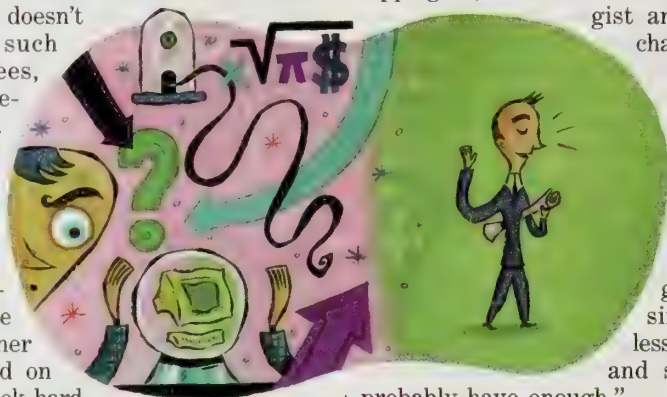
probably have enough."

That's not all we might learn from Lehman. Let's zoom in. What does Lehman do first? It taps industry experts for ideas, leaning heavily on their concrete knowledge of company fundamentals. Next, it asks them to focus on the best ideas—and the ones likely to work over time. Time helps lots of investments bear out, but there's a risk: The further you look, the more sure you are of what you see.

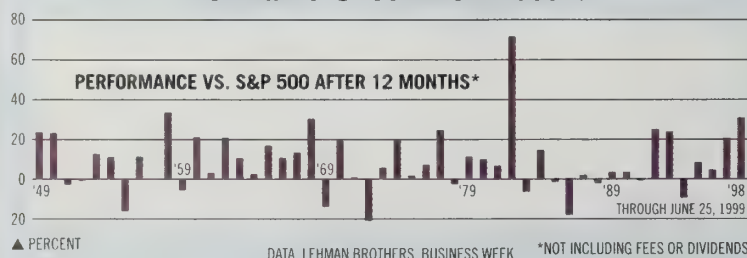
Lehman instead exploits time on the other end, devoting two months to pick stocks in the first year. Apply that formula to a stock you expect to hold three years, and you'd spend 24 months deciding. Sometimes I hate waiting hours, never mind six months, but this is a good way to limit errors.

And for the final cut? Lehman picks by consensus after a full debate. You may not be able to convene a committee. But if you aim to beat the market, try asking someone to poke holes in your investment idea before your next trade.

For my review of the list of Lehman's 10 Uncommon Values for the coming year, go to www.businessweek.com/investor/ or to AOL Keyword: BW Daily.



Lehman's Uncommon Record



QUESTIONS? COMMENTS? E-mail barkerportfolio@businessweek.com or fax (407) 728-1711

ILIPS' BRIGHT GLOW



E. G. MARCIAL

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At a time when most tech companies are under pressure, Philips Electronics (PHG), Europe's largest such outfit, is flying high on Wall Street. So far this year, its stock is up a nifty 45%, to 99. And investment manager Robert Lyon, who invests mainly in large-cap shares, sees Philips headed higher still.

Not many investors realize that Philips' semiconductor operation alone is worth \$20 billion, or \$57 a share, says Lyon, who heads Institutional Capital in Chicago, which manages some \$13 billion. That business has expanded at a fast clip, partly through acquisitions, and is now the sixth-largest worldwide, notes Lyon. Intel and Texas Instruments lead the pack.

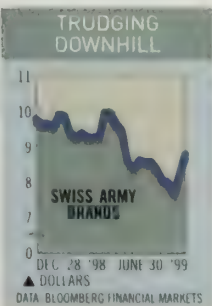
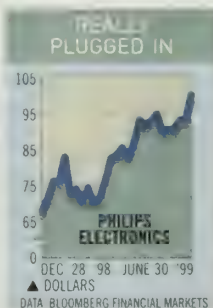
Some Philips investors have been applying pressure on management to take the semiconductor unit public through an IPO. "We don't know whether Philips will do it—to highlight and separate the underlying value of its semiconductors," says Lyon. But the hidden value is there, he adds, and could enhance shareholder value.

Lyon says that although Philips stock has been hot, the price doesn't reflect the intrinsic value of the company's assets. He notes that the combined value of Philips' stakes in other companies comes to \$35 a share. This includes 27% of Taiwan Semiconductor Manufacturing, which trades on the Big Board with a market cap of \$40 billion. Lyon figures Philips' interest is worth \$11 billion, or \$30 a share. Philips also owns 24% of ASM Lithography, worth about \$2 billion, or \$5 a share. Add to that the \$57 a share for the semiconductor business, and the total comes to \$92.

But that doesn't include the value of its basic electronics business, including lighting, consumer electronics, appliances, and personal-care products. What's it worth? A cool \$11.4 billion, or \$36 a share, figures Lyon. At a minimum, therefore, Lyon believes Philips stock is worth \$128.

MAKING A LUNGE FOR SWISS ARMY

Don't think for a minute that Swiss Army Brands (SABI) makes or markets military gear. The only battle Swiss Army may be fighting anytime soon will be for control of the company, which is the exclusive distributor of Forschner cutlery, along with other consumer products such as sunglasses, watches, and pens. And that battle could put upward pressure on its stock price.



All the products Swiss Army Brands carries are manufactured by Victorinox, Europe's largest cutlery maker—based in Switzerland. Victorinox is also the largest Swiss Army shareholder, with a stake it recently raised to 36%. Swiss Army is Victorinox' largest single customer. Victorinox' most recent stock purchase was in early April: It bought 700,000 shares—at \$8 to \$9 apiece—from Brae Group, led by U.S. venture-capital investors Louis Marx and Stanley Rawn. The stock, now at 8%, is down from its 52-week high of 12.

The betting on the Street is that Marx, 67, and Rawn, 71, may decide to sell Brae Group's remaining 24.3% stake in Swiss Army to Victorinox—but at a higher price. In the past, Victorinox paid as much as 14% a share in the open market for Swiss Army stock.

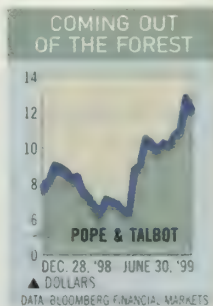
Investment adviser Charles LaLoggia expects Victorinox will make an offer of at least \$15 for Swiss Army. In the meantime, Swiss Army has been busy repurchasing its own shares: It has bought back 400,000 shares, or 5% of total shares outstanding in the past year at an average price of nearly 9 a share.

ALL SET TO MAKE A PROFIT ON PAPER

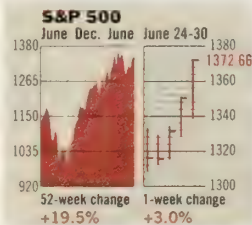
Paper stocks continue to crackle, thanks to the improving markets for pulp and wood products—and to recent industry takeovers. With Weyerhaeuser agreeing to acquire Canadian paper producer MacMillan Bloedel, some pros are rushing to accumulate shares of other paper companies they believe would be among the next targets. One such stock is Pope & Talbot (POP), a manufacturer of lumber, pulp, and pulp chips.

One California money manager who has been accumulating shares says that Georgia-Pacific Group and Champion International have "looked at the books" of Pope and have expressed an interest in the company. With a market value of just \$155 million, based on its current stock price of 11½, "the stock is an easy buy for one of the paper-and-forest-products majors," says this pro, who thinks the stock, with an estimated book value of more than \$11 a share, is worth \$20 a share.

Analyst Linda Lieberman of Bear Stearns describes Pope as a "small-cap pulp and lumber play with a lot of operating leverage." With pulp prices on the rise, she has raised her second-quarter earnings estimate to 3¢ a share, vs. a loss of 10¢. This would be the first time in six quarters that Pope will earn money, she notes. She has raised her full-year 1999 forecast to just breaking even—up from a loss earlier of 22¢. For 2000, she expects Pope to earn 50¢ a share. Georgia-Pacific declined comment as a matter of policy. So did Pope and Champion.



STOCKS



COMMENTARY

The Fed finally did it. On Wednesday June 30, it raised interest rates by a quarter-percentage point. But in a positive surprise for the market, the Fed said it wasn't considering future hikes. The NASDAQ languished during the week leading up to the Fed's decision, but posted a record high on Wednesday. The Dow also rallied, ending the week with a 2.8% gain.

Data: Bloomberg Financial Markets

U.S. MARKETS

	June 30	% change Week	% change Year
Dow Jones Industrials	10,970.8	2.8	22.6
NASDAQ Composite	2686.1	3.4	41.8
NASDAQ 100	2296.9	2.6	71.8
S&P MidCap 400	416.7	1.2	15.7
S&P SmallCap 600	185.5	2.7	-3.1
S&P SuperComposite 1500	288.7	2.8	19.7

SECTORS

	June 30	% change Week	% change Year
S&P/BARRA Growth	770.9	3.9	27.0
S&P/BARRA Value	622.8	2.0	14.3
S&P Basic Materials	134.9	-0.2	4.5
S&P Capital Goods	1028.8	2.7	19.3
S&P Energy	846.6	0.1	11.9
S&P Financials	145.7	3.5	6.4
S&P REIT	85.4	-0.5	-17.0
S&P Transportation	740.6	0.6	6.3
S&P Utilities	257.5	-3.0	4.4
GSTI Internet	495.4	3.5	210.6
Morgan Stanley Cyclical	591.8	-0.7	14.3
PSE Technology	599.9	3.1	73.4

BEST-PERFORMING GROUPS

	Last month %	Last 12 months %
Metals	22.8	Semiconductors 87.9
Defense Electronics	20.6	Computer Systems 80.9
Drug Chains	19.2	Communications Equip. 78.3
Specialty Chemicals	18.1	Broadcasting 65.0
Communications Equip.	17.3	Specialty Appar. Retailers 64.6

GLOBAL MARKETS

	June 30	% change Week
S&P Euro Plus	1315.8	-1.2
London (FT-SE 100)	6318.5	-2.7
Frankfurt (DAX)	5378.5	-0.4
Tokyo (NIKKEI 225)	17,529.7	-0.3
Hong Kong (Hang Seng)	13,532.1	-3.2
Toronto (TSE 300)	7006.4	1.0
Mexico City (IPC)	5829.5	3.4

FUNDAMENTALS

	June 29	Week ago
S&P 500 Dividend Yield	1.20%	1.21%
S&P 500 P/E Ratio (Trailing 12 mos.)	33.8	33.6
S&P 500 P/E Ratio (Next 12 mos.)*	24.6	24.2
First Call Earnings Revision*	-1.62%	-1.75%

*First Call Corp.

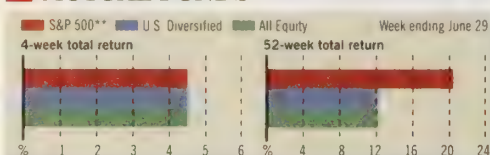
TECHNICAL INDICATORS

	June 29	Week ago
S&P 500 200-day average	1222.7	1214.4
Stocks above 200-day average	58.0%	57.0%
Options: Put/call ratio	0.49	0.44
Insiders: Vickers Sell/buy ratio	1.51	1.51

WORST-PERFORMING GROUPS

	Last month %	Last 12 months %
Machine Tools	-12.9	Manufactured Housing
Cosmetics	-11.9	Apparel Manufacturing
Hospital Management	-10.0	Metal & Glass Container
Soft Drinks	-6.7	Hospital Management
Leisure Time	-6.2	Toys

MUTUAL FUNDS



EQUITY FUND CATEGORIES

Leaders	Four-week total return	%	Laggards	Four-week total return	%
Pacific/Asia ex-Japan	15.2		Real Estate	-1.5	
Japan	13.6		Utilities	1.8	
Diversified Pacific/Asia	12.8		Domestic Hybrid	2.0	
Technology	11.9		International Hybrid	2.0	
Diversified Emerging Mkts.	9.6		Mid-cap Value	2.2	
Leaders	52-week total return	%	Laggards	52-week total return	%
Pacific/Asia ex-Japan	69.5		Real Estate	-6.0	
Technology	65.8		Latin America	-5.6	
Japan	53.3		Small-cap Value	-5.4	
Diversified Pacific/Asia	52.5		Europe	-5.2	
Communications	46.9		Precious Metals	-4.2	

INTEREST RATES

KEY RATES	June 30	Week ago	Year ago
MONEY MARKET FUNDS	4.48%	4.48%	5.10%
90-DAY TREASURY BILLS	4.77	4.73	5.10
1-YEAR TREASURY BILLS	5.05	5.18	5.38
10-YEAR TREASURY NOTES	5.78	6.00	5.44
30-YEAR TREASURY BONDS	5.96	6.13	5.62
30-YEAR FIXED MORTGAGE†	7.74	7.72	7.04

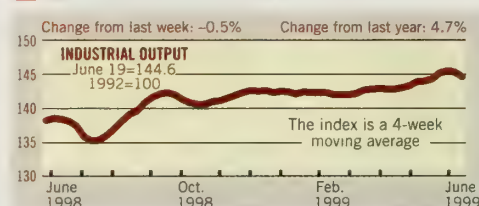
BLOOMBERG MUNI YIELD EQUIVALENT

Taxable equivalent yields on AAA-rated, tax-exempt municipal bonds, assuming a 31% federal tax rate.

	10-yr. bond 30-yr. bond
GENERAL OBLIGATIONS	4.80%
TAXABLE EQUIVALENT	6.96
INSURED REVENUE BONDS	4.93
TAXABLE EQUIVALENT	7.14

†BancQuote, Inc.

BW PRODUCTION INDEX



Information on each of the index components is at www.businessweek.com.
BW production index Copyright 1999 by The McGraw-Hill Companies

The production index continued to decline the week ended June 19. The index also declined, by 1%, to 142.1 from 143.8. After seasonal adjustment power output was down 12%, reflecting temperatures that were well below normal in many regions. Production of oil, lumber, rail-freight traffic were also down. Steel, autos, trucks, and coal increased the latest week.

THE WEEK AHEAD

UNEMPLOYMENT CLAIMS Thursday, July 8, 8:30 a.m. EDT ▶ New filings for state unemployment benefits probably stood at around 300,000 for the week ended July 3, not much different from the 302,000 total in mid-June. Jobless claims have been trending higher since late February, when the four-week moving average hit a 10-year low of 291,000. But the number of new filers still remains small from a historical perspective. With the Federal Reserve focused on signs of price pressures coming from rising wages, the weekly jobless claims have become very important to the financial markets. The tightness of the labor markets was one factor behind the Fed's decision to raise

short-term interest rates by a quarter-point on June 30.

INSTALLMENT CREDIT Thursday, July 8, 3 p.m. EDT ▶ Consumers probably took on \$5 billion more in installment debt than they paid off in May, according to the median forecast of economists surveyed by Standard & Poor's MMS, a division of The McGraw-Hill Companies. The expected increase is above the \$3.7 billion added in April. Household borrowing has accelerated in 1999, with monthly gains averaging \$8 billion, compared with \$5.5 billion in 1998. One reason is that consumers are switching back to credit for purchases. Real consumer spend-

ing has soared by 5% in the past year, and real aftertax income has grown 3.4%. The gap has been financed by credit use as well as wealth gains from the stock market. Rising home prices. The moderate gain expected for May would keep the ratio of installment debt to aftertax income at a high 21.3%. That's close to the record of 21.4% set in March, and well above 1980s' peak of 20.2%.

BusinessWeek ONLINE

For more investment data and the components of the production index, visit www.businessweek.com.

Index to Companies

gives the starting page for a story or
in a significant reference to a company.
Companies are indexed under their own names.
Companies listed only in tables are not included.

106
Devices (AMD) 38
communications 42
(CY) 142
VMZN) 37, 50
ss (AXP) 122
(AOL) 14, 37, 50,
46
(AAPL) 14, 111
com 6
hy (ASMLF) 155
ment Advisors 148
8, 111
Robertson Stephens
46
124
BSC) 124, 155
mmercial Bank 6
pital 122
20
46
ix 40
55
Ventures 142
mmunications
15
rthern Santa Fe
unties 35
ms 18
142
(CEGE) 94, 104
ons 116
ernational (CHA) 155
ction Bank 6
n 84
ologies (CHIR) 94
2
ecular Systems 94
ncial (DCX) 126
116
is (CSCO) 10, 50, 111
111
36, 142
37
puter (CPQ) 36, 37,
chnology (CMVT) 10
irlines (CAI) 36
16
18
nnunications
1
First Boston 84
Grothwaite 42
Cypress Semiconductor (CY) 111
D
DaimlerChrysler (DCX) 35
DayWest 148
Dell Computer (DELL) 10, 37
Deutsche Bank 46, 150, 151
Digital Equipment (CPQ) 36
Dow Chemical (DOW) 45
DreamWorks SKG 46
E
Eastman Kodak (EK) 10
eBay (EBAY) 50
EMC (EMC) 10
e*partners 88
Ernst & Young 116
ESPN 37
eToys (ETYS) 142
E*Trade (EGRP) 88, 122
Exxon (XON) 50
F
Federal BankCentre 46
Finish Line (FINL) 108
First Albany 50
Foot Locker 106, 108
Ford (F) 35
Ford Motor Credit (F) 126
Four Winds Gallery 152
Furman Selz Capital Management
(ING) 148
Furniture.com 142
FurnitureFind.com 142
G
Gazprom 84
GeneMedicine (GMED) 94
General Electric (GE) 50
General Motors (GM) 35
General Motors Acceptance
(GM) 126
GenVec 100
Georgia-Pacific (TGP) 155
Go Corp. 14
Goldman Sachs (GS) 84, 111, 116,
126, 142
Greenwich Associates 126
Gresham 148
Guild.com 142
Guzmana 111
H
Hambrecht & Quist (HQ) 37, 50
Hambrecht (W.R.) 88
Hannaford's HomeRuns.com 142
Hannover Re 116
HarperCollins (NWS) 88
Hewlett-Packard (HWP) 36, 111
Hughes Electronics (GMH) 6
Human Genome Sciences
(HGS) 94
Hyundai (HMC) 84
I
IBM (IBM) 18, 37, 46, 50
iCast 36
Immortality 6
Institutional Capital 155
Intel (INTC) 38, 50, 111, 155
Introgen Therapeutics 94, 104
Inventec 84
Investec Henderson 42
InVitro International (VII) 139
J
Jupiter Communications 142
Just For Feet 108
K
KDE Project 18
KEPCO 84
Kameragen 94
Kookmin Bank 84
Korea Telecom 84
Krung Thai Bank 84
L
Lands' End (LE) 142
Lazard Group 42
Lehman Brothers (LEH) 116, 154
LG Electronics 84
Liberty Media (LMG.A) 88
Living.com 142
Livingtribes.com 6
Lockheed Martin (LMT) 6
Lockwood Financial Services 148
Loral (LOR) 6
Lucent Technologies (LU) 139
Lukoil (LUKOY) 84
M
MacMillan Bloedel 155
Macmillan Computer
Publishing 18
Macroeconomic Advisors 30
Major League Baseball 88
Management Recruiters
International 6
Media Metrix (MMXI) 88
Megabios 94
Merrill Lynch (MER) 6, 84, 116,
122, 126, 148
MicroDesign Resources 38
Microsoft (MSFT) 14, 18, 46, 50
Miramax Films (DIS) 6
Morgan Stanley Capital
International 50, 84
Morgan Stanley Dean Witter
(MWD) 148, 150, 151
N
National Provident Institution 116
National Semiconductor (NSM) 38
NBC (GE) 88
Netscape Communications
(AOL) 14, 18
New Balance 106
New England Patriots 40
News Corp. (NWS) 88
New Vista Capital 111
NexTrend 35
Nielsen Media Research
(NMR) 142
Nike (NKE) 106, 108
Nippon Telegraph & Telephone
(NTT) 50
Nokia (NOKA) 50
Nomura Securities 150
Novartis Pharmaceuticals 104
NPD Group 106
O
ObitDetails.com 6
Oriental Land 116
Orlando Hyatt 6
P
PaineWebber (PWJ) 148
Parke-Davis Pharmaceutical
Research (WLA) 100
PC Data 38
Peapod 142
Pearson 42
Penguin Putnam 42
PepsiCo (PEP) 111
Petrobras (PEBR) 84
Phelps Dodge (PD) 46
Philips Electronics (PHG) 155
Pohang Iron & Steel 84
Pop & Talbot (POP) 155
PowerQuest 18
Prudential Securities 45, 148
Q
Quanta 84
R
Red Hat 18
Reebok International (RBK) 106
Residential Reinsurance 116
Rhône-Poulenc Rorer (RP) 104
Richards (S.P.) (GPC) 122
Road Runner Sports 108
Rod-I Electronics 111
S
Salomon (Kort) 106
Salomon Smith Barney (S) 148
Samsung Display Devices 84
Security 106
SBC 46
Schwab (Charles) (SCH) 6, 122,
148
Sears (S) 106
Sequent Computer 46
SG Cowen Securities 38, 104
Sheraton Inn 6
Shiprock Trading 152
Siam Commercial Bank 84
Silicon Graphics (SGI) 14, 111
Softbank 88
Sotheby's (BID) 152
Speedo 6
Sports Authority (TSA) 108
Sportscorp 40
Standard & Poor's (MHP) 30, 156
Star Division 18
Starbucks (SBUX) 46
State Farm Fire & Casualty 116
State Street Research 88
Sterling Foster 124
Streamline.com (SLNE) 142
Sun Microsystems (SUNW) 111
Surgutneftegaz 84
Swiss Army Brands (SABI) 155
T
Taiwan Semiconductor
Manufacturing (TSM) 155
Targeted Genetics (TGEN) 94
Tec Nos Pos Trading Post 152
Telefonica 42
Telefonos de Mexico (TMX) 84
Texas Instruments (TXN) 155
3Com (COMS) 38,
3M (MMM) 45
30 Minute Photos Etc. 10
Time Warner (TWX) 88
Toro (TTC) 45
Toyota (TOYOY) 35, 116
Transgene (TRGNY) 94, 104
TSMC 84
Tussauds Group 42
20th Century Fox (FOX) 88
U
Union Labor Life Insurance 46
V
Valentis (VLTS) 104
Van Eck Associates 84
Vanguard Group 154
Vascular Genetics 94
Venator Group (Z) 106, 108
Viacom (VIA.B) 42
Vical (VICAL) 94, 104
Victorinox 155
W
Wall Street Analytics Software 111
Wal-Mart (WMT) 46
Walt Disney (DIS) 6, 88, 116
Wasserstein Perella Securities 35
Waste Management (WMI) 45
Weisel (Thomas) Partners 106
Weyerhaeuser (WY) 155
Williams-Sonoma (WSM) 46
Woolworth (Z) 50
works.com 122
World Wide Cemetery 6
Y
Yahoo! (YHOO) 37, 88
YPF (YPF) 84

This Week, Online

Business Week presents
frequent live conferences
and chats on America
Online—your opportunity
to ask questions about
timely topics.

Tuesday

Robert Natale beats the S&P
500 with the S&P STARS
Portfolio Fund. Find out his
secrets in this chat co-
hosted by S&P Personal
Wealth. July 6
4:30 p.m. EDT

Thursday

Join Fred Dickson, director of
research at Branch Cabell &
Co., to learn what's hot now
in large-cap growth stocks.
July 8
9 p.m. EDT

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THE BUDGET SURPLUS: DON'T BLOW IT

When the Federal Reserve, the Office of Management & Budget, the Congressional Budget Office, the Democrats, the Republicans and the nation's top economists all agree, it is time to declare victory for the notion of a New Economy. Whether it's the debate over interest rates or the negotiations over the budget surplus, policymakers now start their discussions with the assumption that the economy can grow significantly faster with less inflation and lower unemployment than it could for the past two decades. Corporate CEOs, investors, and anyone living in Silicon Valley, of course, have been saying this for some time, as information technology and globalization transformed their lives. Now a torrent of tax revenues from higher incomes and stock market gains is converting Washington—so much so that a certain giddiness is taking hold and a windfall mentality is in the air. Our advice is to take a moment for some sober reflection.

The soaring surplus will alter the nation's mix of monetary and fiscal policies in ways yet unforeseen. Before Congress and the Administration indulge in hasty election-year decisions that lock in new spending or tax cuts well into the next century, it might be worthwhile to ask what are the right policies for nurturing a high-growth, high-tech economy? American history suggests that in periods of technological change, such as the rise of railroads in the 1870s and autos in the 1920s, growth is fast but often volatile. Downturns can be vicious and extended. Mistaken government policies can easily turn booms into busts (witness the Fed's tightening in 1930). As a nation, we've actually been here before. The right mix of policies is crucial to long-term success. But what are they?

WE MUST HAVE BALANCE

Right now, Washington fiscal policy is being forged in a political battle over the \$6 trillion in surplus tax revenues expected in the next 15 years. Both sides have legitimate points to make. The Democrats want to use most of the surplus to finally solve the Social Security and Medicare underfunding shortfalls and pay for the boomers' retirement. This would also allow the government to pay all of the national debt and reduce interest rates. What could be better for growth than lower rates?

The Republicans have an answer—lower taxes. The GOP would also fund Social Security and Medicare, albeit at a lower level, but would add a giant \$1 trillion tax cut to their package. Where the Democrats would retain the Entitlement State, the Republicans would shrink it and return a sizeable part of the surplus to the private sector. What could be better for growth than lower taxes?

The answer to both parties is flexibility and balance. Both Democratic and Republican proposals lock away the surplus at a time when the economy is making a delicate transition from industry to high technology. No one really knows how the New Economy will evolve and what it will take to sustain

it. The Federal Reserve has shown an amazing sea pants flexibility in recent years in guiding monetary around the shoals of conventional economic wisdom to New Economy growth. Fiscal policy will have to show similar innovativeness if it is to succeed.

Yet the Democrats are proposing a geezer budget for the next century that will spend 80% of all federal revenue on tiring old boomers. It expands entitlements, such as social security, to everyone regardless of need. The New Economy requires a more balanced approach. When it comes to funding growth, it is better to allocate more to educating the workforce and training the workforce and less to the retiring elderly. Taking 5% of the \$6 trillion surplus and devoting it to education, school vouchers, and guaranteeing college for a qualified student would have an enormous impact. Reducing the level of spending on pure research and development is a good idea. More money for R&D would keep the U.S. at the leading edge of technology. Finally, paying off the national debt sounds great, but taking that step would basically freeze America's capital markets and erode liquidity. Blindly pursuing the gargantuan surplus may be pushing policymakers toward bad fiscal policy that could harm monetary policy.

TOMORROW, NOT YESTERDAY

The Republicans are playing true to form by locking away much of the surplus as they can in the form of a tax cut. In an older economy suffering from inadequate demand, tax cuts are an appropriate policy. But the New Economy is much hotter than the old, driven by capital investment. Raising interest rates, Fed Chairman Alan Greenspan believes that at 4% a year, the economy is growing too fast. A deep tax cut anytime soon could add fuel to inflationary fires, sending interest rates higher.

Talk of trillions of "extra" dollars is making policymakers drunk on programs that lock in spending or tax cuts for decades to come. Yet key components of the economy are playing new roles that may require new government responses. The stock market, for example, is clearly acting as a public venture capitalist, changing notions of what it means to be "overvalued." Business models are morphing, changing the idea of adequate profitability. And the business environment may be taking on a new shape. The next downturn could be just as different as the upturn, perhaps unexpected, because of the concentration of investment in a new area of the economy—high tech.

All this argues for flexibility in policy. Policies on regulation, taxes, exports, privacy, and litigation must evolve as the economy evolves. The Fed is struggling mightily to understand the New Economy and it is feeling its way. The White House and Congress as well must take the time to understand and to husband some of its newfound fiscal resources. Deal with the opportunities of tomorrow, not just the problems of yesterday.

I love the smell
of asphalt
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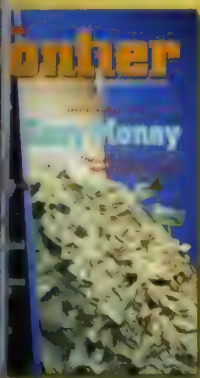
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Small Business
opposite page 68)

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PAGE 108



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Company: Abu Garcia

Partner: Intenia International

Tools: AS/400, DB2

Solution: Orders/Inventory Extranet

1 Abu Garcia projects shortening its order-to-delivery time by 20% with its Web-based retail system.

2 Retailers use passcodes to access customized order forms, rates and discounts online.

3 Consumers can order special parts directly from the Web site, saving retailers the hassle of processing orders just for spare parts.

4 Web site works with distributors and retailers in their specified language and currency.

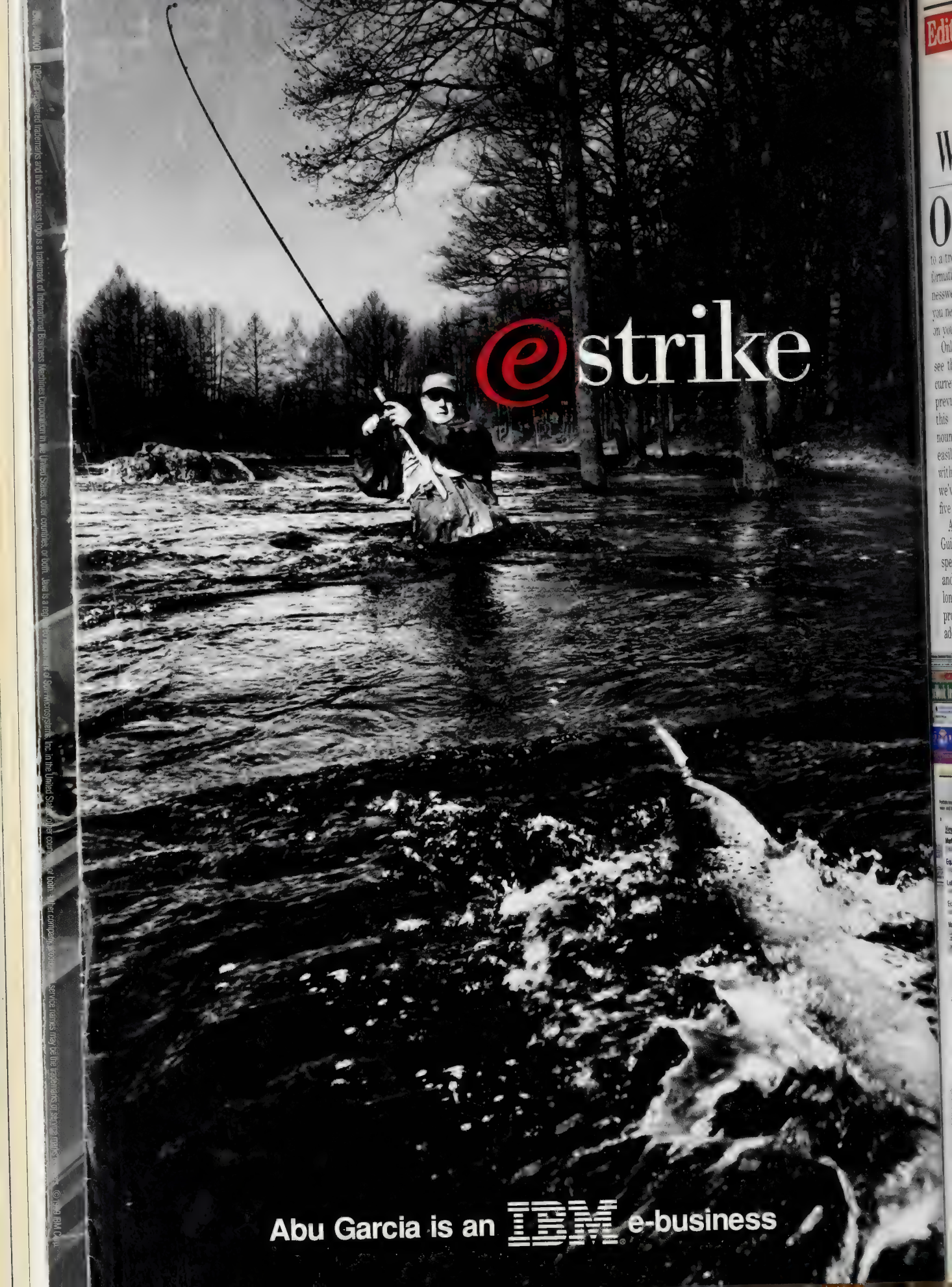
5 Abu Garcia will be expanding its customer orders across Europe, Africa and the Middle East via the Internet.

Everyone knows that part of e-business is selling things over the Internet. But there's a lot more to it than just the transaction. e-business can streamline the order process, track inventory and cut costs. But because e-business can be different for each industry and company, you need software that's designed for you.

Intenia International and IBM have worked together on enterprise resource planning (ERP) solutions across a variety of industries. Intenia has been at the forefront of Java®-based ERP solution development.

Recently, the IBM/Intenia partnership worked wonders for Abu Garcia, which needed to grow its fishing tackle business without increasing operating costs. Intenia and IBM helped move both ordering and inventory management online, reducing back-office costs and time-to-market, and improving customer satisfaction.

"Our e-business solution has brought us to peak efficiency in our retail business," says Ingrid Normann, IT manager for Abu Garcia. "This will allow us to grow faster than ever before." Find out how e-business can help improve your business at www.ibm.com/e-business/intenia or call 1 800 IBM 7080, ext. BP03.



@strike

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WHAT YOU'LL NET ON THE WEB

One of the benefits of being a BUSINESS WEEK subscriber is free access to a trove of resources and information at our Web site, businessweek.com. To register, all you need is the account number on your mailing label.

Only subscribers are able to see the entire contents of the current magazine and the two previous issues. And starting this week, we're glad to announce, subscribers can also easily search for and read—without charge—any story we've printed during the past five years.

As you read this week's Annual Retirement Guide, for example, you'll have access to our special reports on retirement published in 1997 and 1998—along with past stories on annuities, long-term care plans, and the best investment products and strategies. These are available in addition through America Online (keyword: BW).

We also invite you to our sister site, personalwealth.com. There you can browse an array of Standard & Poor's financial-planning resources. You can plug in your own numbers and expectations into S&P Personal Wealth's interactive financial planner and get a detailed asset-allocation plan to help you reach your retirement goals.

Of course, both BUSINESS WEEK Online and Personal Wealth can also provide you with broad investment information,

A CLICK AWAY: Your personal planning data

ranging from risk- and tax-adjusted mutual-fund rankings to the Daily Briefing, with news and analysis that can help you build and protect your nest egg. We believe these online offerings will complement the timely and useful information and analysis we bring you in the magazine.

A CORNUCOPIA OF KUDOS

BUSINESS WEEK Editor-in-Chief Stephen B. Shepard received the 1999 Lifetime Achievement Award when the Gerald Loeb Awards for distinguished business and financial journalism were



ARCHIVE ACCESS: Five years of back issues free to subscribers

presented on June 28 in Los Angeles. The Lifetime is given annually to a journalist whose career "has exemplified the consistent and superior insight and professional skills necessary to contribute to the public's understanding of business, finance, and economic issues."

Steve, who earlier this year was named to the American Society of Magazine Editors' Hall of Fame (BW—Apr. 19), joins a distinguished group of past Loeb Lifetime recipients including Barron's Alan Abelson, Newsweek's Jane Bryant Quinn, Fortune's Marshall Loeb, and

The New York Times' Leonard Silk.

BUSINESS WEEK was a finalist in the Loeb Awards' magazine category for "Who Can You Trust?" our groundbreaking Oct. 5 cover package on the quality of financial information that comes from corporations, their accountants, and Wall Street analysts. The stories were reported and written by Nanette Byrnes, Jeffrey M. Laderman, Richard A. Melcher, and the team. The package also won an American University/Investment Company Institute Education Foundation Award for Excellence in Personal Finance Reporting and won a Deadline Club Award for best business reporting, presented by the New York City Chapter of the Society of Professional Journalists.

The Computer Press Assn. honored us for two years running as the best overall general-interest publication, for our coverage of information technology.

And our Asian editorial team—Michael Shari, Joyce Barnathan, Pete Engardio, Dean Foust, Jonathan Moore, Sheri Prasso, and Christopher Power—was honored with the Overseas Press Club's Morton Frank Award for best business reporting from abroad in magazines, for a series of stories on the crisis in Indonesia.

We are very proud to have won these accolades, and we believe they are the result of keeping our readers in mind as we report and edit each issue.



LOEB: Shepard's Lifetime award

Mark Morrison

Managing Editor



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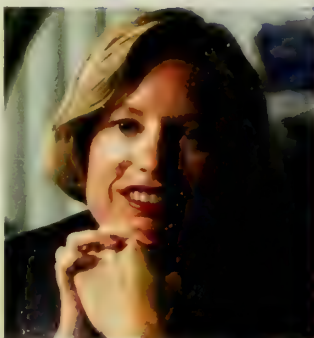
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HOW TO RETIRE

With planning, your
golden years can
really shine page 108

BusinessWeek

JULY 19, 1999

**CATCH-UP TIME**

Fidelity's online
operations are under
the gun page 84

**Cover Story****108 HOW TO RETIRE**

Building the best plan is more than just number-crunching and poring over mutual-fund ratings. It's deciding how to live the rest of your life: How long to work at what you're doing, whether to downshift into a second career, when to go to full leisure mode. Above all, it's making decisions far enough in advance

118 SPOTS TO STASH YOUR PORTFOLIO

The Web's take on diversification

120 SCOPE OUT YOUR BENEFITS

The PEBES form offers a sneak preview

122 UNSCRAMBLING A NEST EGG

IRA withdrawals: The options are many

126 AN EARLY DIP INTO THE COOKIE JAR

Getting to that IRA before 59½

127 SOMEONE TO WATCH OVER YOU

Long-term care insurance: A how-to

132 WHERE TO FIND A HELPING HAND

Picking an "assisted-living" facility

136 DESIGN FOR SENIOR LIVING

Private homes that are retiree-friendly

138 COMMENTARY: RETIREMENT

How the rules are being rewritten

News: Analysis & Commentary**40 CAN DISNEY CREATE NEW MAGIC?**

These aren't the good old days for Mickey & Co.—and Wall Street sees no quick fix

42 THE PHANTOM MENACING TOYMAKERS

Despite the *Star Wars* prequel's success, tie-in sales are disappointing

43 COMMENTARY: UNIONS

Why they're off-limits to many workers

44 HELP WANTED, DESPERATELY

With unemployment so low, states are courting workers aggressively

45 COMMENTARY: TRADE

Let's dump some antidumping laws

46 COMMENTARY: MEDICARE

Providing medicine to the elderly

47 HIGH TECH IS ON A ROLL

As Silicon Valley writes fat campaign checks, the pols pay heed

48 OUT OF THE FAST LANE?

Minivan challenge for DaimlerChrysler

50 COMMENTARY: WIRELESS NETWORKS

MCI WorldCom should look into GSM

52 IN BUSINESS THIS WEEK**International Business****56 GERMANY: DEUTSCHE BANK**

Rolf Breuer wants the bank to be a global leader. Is he asking too much?

60 FRANCE: TOTALFINA

Merging with Elf would keep Total in an industry where size counts

61 SWEDEN: ERICSSON

Nilsson's ouster as CEO is sure to bring more management turmoil

63 CHINA: AUTOMOBILES

At last, foreign companies will be producing a broader range of cars

67 INTERNATIONAL OUTLOOK

Conservatives could cut the pace of reform-minded Premier Zhu Rongji

Economic Analysis**19 ECONOMIC VIEWPOINT**

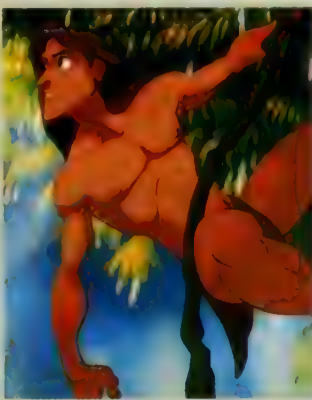
Garten: The NBA needs to do serious globetrotting

20 ECONOMIC TRENDS

Power couples, CEO options, Boomer red-hot office market

37 BUSINESS OUTLOOK

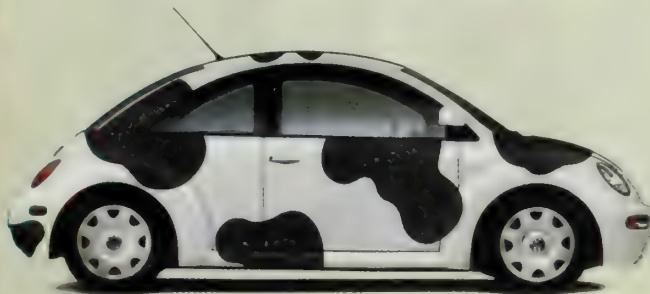
Good job stats worry the Fed



UP A TREE
Entertainment's
changing dynamics
dog Disney page 40



FRAGILE BET
Why Park
Place's grand casino
plans look riskier now page 98



MILKING THE NET
Gateway's gambit: Grab first-time
buyers early, and hold on tight page 77



BANK JOB
Breuer's battle at
Deutsche page 56



MR. BLACK INK?
TheStreet.com
brings in a sage page 82

Government

WASHINGTON OUTLOOK
Only, trial lawyers are on the
sive

Science & Technology

BETES CURE IN THE MAKING?
Archers find promising results by
ining cell transplants with
rimental anti-rejection drugs
DEVELOPMENTS TO WATCH
sistor towers, the cleanest cars of
olor-free pig farms, sun storms

Information Technology

TECHNOLOGY & YOU
e or palmtop? Combo devices show
use, but there are kinks to work out
WHAT GAIN FOR GATEWAY?
computer maker's plan: Become
ies' first choice for PC financing,
ing, and Internet services
FREE-PC GAME
t-time users are being locked in
long-term contracts—and they may
that just fine

People

82 THE STREET.COM'S GREYBEARD
Can Kevin English firm up the financial
news site's foundation and provide
staying power?

Finance

84 FIDELITY.COM GETS SERIOUS
It amasses a big war chest to battle top
online brokerages. But the mutual-fund
giant has a lot of catching up to do
86 THE BATTLE TO DO NET BILLING
Banks want to be your online bill
collectors. But they had better act fast,
or portal rivals might beat them to it
91 IMITATION AND FLATTERY FOR WIT
The pioneer of Internet IPOs is followed
by a posse of copycat rivals that could
upstage the startup
92 ZWEIG-DIMENNA'S QUIET MAN
Joe DiMenna's style is low-key, but he
calls winning shots for the \$4 billion
hedge fund

The Workplace

96 COMMENTARY: SWEATSHOPS
Activists are putting Europe's apparel
companies in the hot seat

The Corporation

98 THE EMPTY SPACE AT PARK PLACE
With its tough, respected CEO out sick,
the casino operator's investors are
getting nervous

Features

1 EDITOR'S MEMO
6 UP FRONT
12 READERS REPORT
18 BOOKS
Cook: *Eleanor Roosevelt*
140 THE BARKER PORTFOLIO
An offbeat site for offbeat investors
147 GENE MARCIAL: INSIDE WALL STREET
148 FIGURES OF THE WEEK
149 INDEX TO COMPANIES
150 EDITORIALS

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Up Front

EDITED BY ROBERT McNATT

I-WAY PATROL

THE CLONING OF IDEALAB!



BILL GROSS, FOUNDER OF THE fecund Internet incubator called idealab!, has had his share of success. Of the two dozen or so companies spawned there so far, three have gone public in a big way; Ticketmaster Online-CitySearch, GoTo.com, and eToys. A fourth, Tickets.com Inc., has an initial public offering in the wings.

With a track record like that, it would seem Gross has no problems. But alas—he's now so successful that he can't fit all the startups he's created into his Pasadena (Calif.) office. There are al-

ready too many companies sharing everything from telephones to technical staff and too few executives willing to move to Southern California to run them.

So Gross is saying he will take "the cookie-cutter approach" that he uses for Internet companies and apply it to the idealab! incubator itself. To attract executives, Gross intends to set up copies of the incubator in San Francisco, New York, Boston, and London. Like the original, each incubator will be a

GROSS:
Cookie-cutting

limited partnership with at least one partner hanging around full-time to provide

advice and counsel. Although the companies will take form around the globe, don't be too surprised if most of the innovations still originate in Pasadena. *Larry Armstrong*

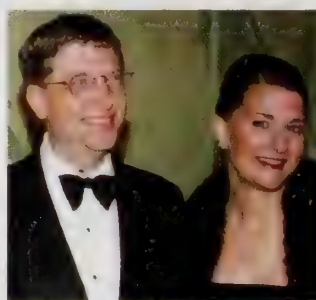
THE OLD WORLD

STARTUPS GROW AT AN ESCARGOT'S PACE

EUROPEAN ENTREPRENEURS may bask in the success of such tech stars as Finland's Nokia or German software maker SAP. But a new report says that entrepreneurialism has yet to hit fever pitch.

TALK SHOW "I have to go out and make a living for family."

—Bill Clinton speaking about his career plans after his Presidential term expires.



GENIUS WATCH

'PLEASE PASS THE SALT, BILL'

DUKE UNIVERSITY, LIKE MOST institutions of higher learning, leaves no stone unturned when raising money. But unlike other universities, where big donations might lead to a building with your name on it or seats on the 50-yard line, a sizable donation to Duke recently landed you a most singular honor: dinner with the world's richest man.

That was compliments of Melinda French Gates, who

GATESES: Company c

is a Duke alum and the wife of Microsoft Chairman Bill Gates. Toner was part of a weekend getaway called the "Sabbatical" organized by the university. A spokeswoman for the William H. Foundation emphasizes the June 26 dinner for the couple's spectacular title spread was not a privilege giving Duke the money. After all, the Gates could win that one down. It was, however, Gates's way of thanking school's most generous donors, who have helped Duke bring in \$890 million toward its goal of raising \$1 billion by 2003.

So how much must give to eat with Bill Melinda? No one is saying. But if you have to ask, didn't make the short list. *Chef Gates. Michael M*



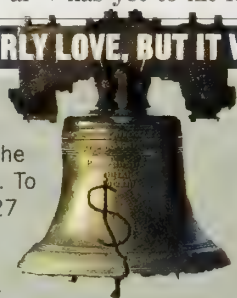
A study from the European Employers Assn., UNICE, says the number of new companies formed on the Continent still seriously lags the U.S. America, says UNICE, creates five times as many fast-growing companies as Europe does, and four times as many initial public offerings. "We knew

that Europe had to become more entrepreneurial," Wytze Russchen, one of the authors. "Yet we were surprised that we have so much to do to catch up." For example, it still takes five times longer to get a small business off the ground in Europe, notes UNICE. Plus, businesses suffer from high wages and taxes than their U.S. counterparts.

UNICE is calling for dramatic changes to unleash entrepreneurial talent. For one thing, it wants governments to make it easier to hire and fire. It's a tough choice: more businesses in the long term or more unemployment in the short run. *William Echik*

THE LIST: BROTHERLY LOVE, BUT IT WILL COST YOU

For five years, Philadelphia has been the most heavily taxed big city in the nation for small business. To compare tax burdens in 27 U.S. cities, Deloitte & Touche constructed a hypothetical service company, with \$15 million in annual revenues, \$1.5 million in pretax income, \$10 million in net worth, a \$5 million annual payroll, and 125 employees. The comparison totaled up income, sales, property, payroll, telecommunications, franchise, and occupation taxes, as of April, 1998.



	1998 TOTAL TAXES MILLIONS	1993 RANK
1. PHILADELPHIA	\$1,394,097	1
2. NEW YORK	1,389,570	4
3. SEATTLE	1,383,413	3
4. PITTSBURGH	1,339,824	2
5. CLEVELAND	1,303,489	7
6. CHICAGO	1,294,692	5
7. NEWARK	1,252,324	10
8. DETROIT	1,247,956	9
9. MINNEAPOLIS	1,247,315	8
10. LOS ANGELES	1,238,904	6

DATA: DELOITTE & TOUCHE, LLP

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Up Front

SLUGFESTS

THESE GAFFES DON'T SEEM TEMPORARY

WILL MICROSOFT EVER STOP putting its foot in its mouth? The software giant recently lost another appeal in a long-running court case involving its temporary workers. Fun-

Those are temps who have been with the company sometimes for years yet are denied Microsoft benefits. Microsoft contends that they are agency employees. So it appealed to the full court. But on June 21, CFO Gregory Maffei took a swipe at the judiciary when asked about the case at the Institute of Management Accountants in Seattle. He said: "There are nutty judges in this country. Let us start with that premise." Three days later, the full Ninth Circuit nixed Microsoft's appeal.

Microsoft hasn't made a decision whether to appeal again, even though some temps want to organize and bargain with the company. The software giant told them to talk with their agencies. So the fight goes on. And a chastened Maffei now says that he has the "utmost respect" for the courts.

Aaron Bernstein



ny coincidence, though: It lost just days after a top company official publicly bashed the courts.

In mid-May, a three-judge panel of the Ninth Circuit Court of Appeals ruled against the company in its battle with "permatemps."

CITY LIFE

IN TOKYO, THE PLOTS THICKEN

SMALL SPACES CAN MEAN BIG profits in Tokyo. Since 1992, smart entrepreneurs have profited by turning Tokyo's many tiny, irregular plots of land into parking lots. By squeezing as few as one or

one such company, Park24, now runs over 2,500 pint-size parking lots, which typically allot a total of 204 square feet per car. But urban drivers aren't the only ones happy that Park24 is around. Investors have driven up Park24's stock fivefold in the past year. Parking is a growth industry, says Tet-

suya Furumoto, an analyst at Nikko Salomon Smith Barney. The Japanese market for unmanned metered parking lots, estimated at \$413.2 million, has been growing at 20% a year, helped by a police crackdown on illegal parking.

"We are making a contribution to the society," says a Park24 spokesman. How? One hour of parking may cost \$5. But a Tokyo ticket and tow can run \$245 and up.

Miki Tanikawa

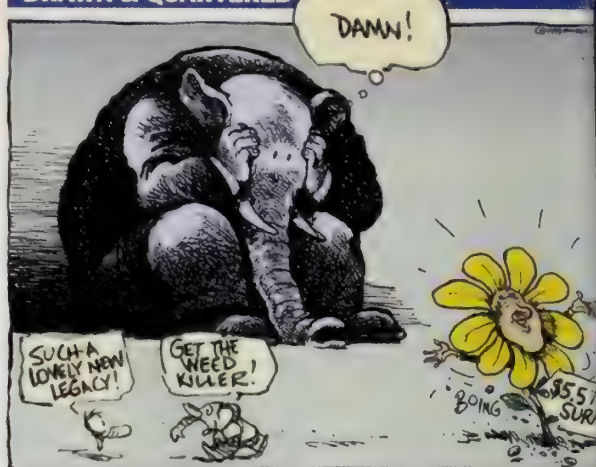


PARK 'N' SAVE: Pint-size parking lot

two cars onto metered patches of concrete, landowners have found a lucrative business, using space overlooked before Japan's recession.

Capitalizing on the city's chronic parking shortages,

DRAWN & QUARTERED



FWAY PATROL

NEXT, ONLINE BIDS OVER JAIL TIME?

WITH AMAZON.COM AUCTIONS and eBay.com on the Net, it was only a matter of time before someone took things a little further and let clients bid on justice. clickNsettle.com, a new subsidiary of National Arbitration & Mediation (NAM), takes the hidden bid aspect of cyber auction houses and applies it to settling civil cases online.

No other online mediation service shares clickNsettle's methodology. First, the wronged party files a claim against the defendant, often an insurance company. clickNsettle.com notifies the insurer via E-mail.

The insurer then confidentially submits online amounts it is willing to settle. The claimant mits an amount considered satisfactory. If it falls within specified range of one bids, the matter is resolved. If not, the claimant has more bids. The claimant pays clickNsettle \$75, win or lose. If the claimant wins, the maximum fee for bringing the case is \$275.

A settlement can take only what the claimant says CEO Ron Rael. NAM says insurers, such as Travelers, like the idea because it can avoid endless haggling. And if none of the bids is acceptable? There's always mediation, or the right day in court.

Stacey Higginbotham



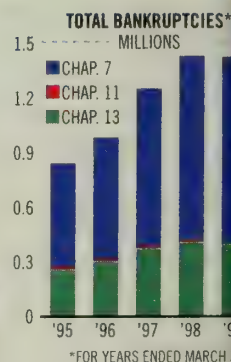
THE BIG PICTURE

A LITTLE LESS BROKE

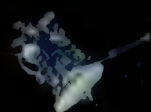
After a steady climb, bankruptcy filings have eased off. In the past year, business filings fell 21.9%, though personal filings were up 0.6%.



In Chapter 7, assets are sold to repay creditors. In Chapter 11, businesses operate while reorganizing. In Chapter 13, creditors are repaid in installments. Totals include small number of other filings. DATA: DELOITTE & TOUCHE, ADMINISTRATIVE OFFICE OF THE U.S. COURTS



SSION: Space is called the final frontier, but these days it's also called a business. So every mission points in directions at once—toward future opportunity and today's bottom line. To us, these aren't opposites because both are led the same way. With aggressive innovation backed by experience. Which points in one direction. To Lockheed Martin.



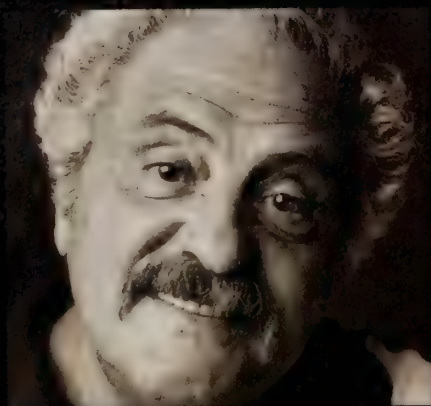
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- Free Thomson's financial research.
- Customizable graphs.
- We let you buy Treasuries 24 hrs a day. (A first.)
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- Option to invest via touch-tone telephone.
- Option to invest with a real, live human being.
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- No account maintenance fees.
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- Free Reuters news links related to your holdings.
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- Place orders 24 x 7 x 365.*
- Free interactive financial calculators.
- Free demo to try before you buy.
- Chart your budget with our interactive calculator.
- Real time bid and ask prices for all U.S. Treasuries.
- High level of internet security.
- Free unlimited check writing.
- Get real-time portfolio updates.
- Free mutual fund selection tools.
- No IRA setup fee.
- No special software required.
- Set up your own watch lists.
- Free college planning worksheets.
- Money market accounts, with tax-exempt choices.
- See what your money's doing every second.
- Customizable quote baskets.
- Free IRA worksheets.
- Buy and sell municipal bonds online.
- So easy to use, your kids can help.
- Optional online application to speed things up.
- Both Mac and PC friendly.
- We can help you roll over your 401k.
- Free online retirement calculator.
- Margin accounts for those who qualify.
- Free automatic dividend reinvestment program.
- We hold billions in customer assets.
- We can help you set up a Roth IRA.
- "Best Overall Online Broker"—SmartMoney, 1998.*
- You did see number one, didn't you?

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E-BIZ ISN'T GETTING A FREE RIDE ON TAXES

Mike France is wide of the mark in "A Web sales tax: Not if, but when" (Legal Affairs, June 21) when he claims state and local officials have been willing to let tax collection slide and that online marketers are getting a free ride.

The reality is that retail, catalog, and Internet merchants are now treated the same: Where they have a physical presence or "nexus," they collect from customers. Web merchants do collect taxes now in places where they have such facilities—and they are collecting such taxes from online customers in those jurisdictions. The Internet tax moratorium has not halted such collections.

Courts have backed direct marketers on two grounds: First, that it's taxation without representation where a merchant has no physical presence; and second, that cross-border tax collection is an interstate commerce issue that only Congress can regulate.

Courts also have rejected the states' creative theories that using 800 numbers, having money-back guarantees, and exhibiting at trade shows for short periods of time create situations where catalogers are liable for tax collection.

So far, there has been no successful effort by states and localities to simplify tax codes for any businesses that might be willing to collect and remit based on a streamlined format. Tax harmony remains an elusive goal.

We wholeheartedly agree that, for Internet-based commerce and perhaps on all types of commerce, a forward-looking tax policy is needed for the 21st century, and not one based on Depression-era thinking that has propelled the proliferation of regressive sales taxes.

Roscoe Starek
 Direct Marketing Assn.
 Washington

HEY, YOU'VE GOT THE WRONG GUYS

"Stock options bite back" (News: Analysis & Commentary, June 14) stat-

ed that West Group is being sued. West Group is a new organization created by the purchase of West Publishing by Thomson Corp. in 1996. Lawsuits and allegations mentioned in the article are against West Publishing, not West Group.

Both the plaintiffs and the judge acknowledged that the actions of West Group and its management are in question.

Steven A. May
 Associate General Counsel
 Thomson Corp.
 Stamford, Conn.

IS AMERICA THE MOST VENAL NATION?

In your listing of the most corrupt nations ("The list," Up Front, June 21), the scoring system that you employed obviously does not take into account special-interest lobbying, its corrupting influence on election campaigns and the practice of "pork-barrel" politics—that exists in this country. These billions of dollars spent on lobbying and campaign were included in the U.S. into the position as the most corrupt nation in the world.

Chandran Cheema
 Saratoga, Calif.

AN ODD QUOTE ABOUT ASIANS

As a young Asian American and an educated human being, I have a complaint about the article "Are music companies blinded by fright?" (Entertainment, June 28). The complaint is from the following quote: "A stored on a floppy disk may not be playable on any other device except one on which it was originally recorded. That's likely to chafe the average American, and more so the average Asian, who thinks it's a God-given right to copy something," says Richard Hertly, director of research at the Entertainment Group, a testing-and-research firm in Seaford, N.Y." Now, why

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CTIONS & CLARIFICATIONS

urday night at the holographs?"
pments to Watch, June 28) azoben-
as described incorrectly. It is an
ial chemical, not a type of polyester.

nk "the average Asian" would
likely to be "chafed" than the
American?

Edward Lee
New York

S. MAY HAVE 'THE WRONG SE AND TOO MUCH OF IT'?

Pentagon's badly aimed billions"
als, June 28) was right on target.
operly focused on the new air-
at are being designed to replace
that worked so effectively in
. There are, however, many new
s in the Defense budget designed
ace others that were never even
ered for use in Kosovo. Most no-
among these is the new attack
rine.

marines are stealthy craft that
originally designed to be used
powerful enemies. Not surpris-
he attack submarine force of the
Navy has not fired a torpedo in
since World War II. Certainly
rines were excellent intelligence-
ing platforms during the cold war,
ey were not used much in Ko-
ietnam, Grenada, Panama, Iraq,
ia, Bosnia, or Kosovo. True, at-
ubmarines did shoot cruise miss-
uring the gulf war as a demon-
n. Because Iraq had no navy to
of, however, any ship could have
hose missiles.

current attack submarines are
or to any in the world and will be
at least another decade. Most of
ships are about halfway through
intended service life. Some of
modern submarines, however, are
decommissioned early in order to
ne total number down to an im-
limit of 45 to 55 submarines. Oth-
ill be destroyed early to make
for the new class of submarines.
rst new attack submarine will cost
\$3 billion. Follow-on ships will
bout \$1.5 billion.

is current practice of destroying
rily superior submarines early in
service lifetimes in order to make
for more expensive submarines
will have no apparent rivals for at
a decade can only be classified as
ess.

James T. Bush
Captain, U. S. Navy (Ret.)
Arlington, Va.

Since the end of the cold war, some
of the finest public servants from two
Administrations have failed to come to
grips with the problem of an oversized
budget that is buying us the wrong de-
fense and too much of it. Good men and
women, in and out of uniform, have
averted their eyes because the political
problem is tough, and neither Congress
nor the Clinton Administration has the
stomach for a fight. Last winter, *Army
Times* bannered the story of spare parts
shortages that dropped the forces' mis-

sion capable rate for Air Force planes
to 74%, down 40% in five years. Planes
are parked in hangars all over the world
because they've been cannibalized for
parts.

If the Pentagon were a business, the
CEO would have called his team togeth-
er 10 years ago and said: "Folks, the
market has changed. There's no more
Soviet Union. I want you to cut your
budgets 15% because I need the money
for a new market—our many domestic
problems. If you can't find the cuts, let



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me know, and I'll get a new team."

Until your editorial, nobody in the national press had noticed.

James S. Doyle
Bethesda, Md.

Editor's note: The writer retired in 1998 as vice-president and executive editor of Army Times, Navy Times, Marine Corps Times, and Air Force Times.

Congratulations to BUSINESS WEEK for reporting the Pentagon's dirty little secret: The war over Kosovo is evidence of an incredible \$300 billion misallocation of assets.

You are so right: The old A-6 Intruders, which the Navy scrapped (because faster is better), were badly needed. Their absence prolonged hostilities.

But it's worse than that. The Navy is still ordering billions in cold war submarines, mega-warships, and mega-aircraft, and spending itself into a weaker position. The Army and Air Force are doing the same.

At a time when proven domestic needs are underfunded or not funded at all, the Pentagon is still sucking up more than half the annual discretionary budget on a wide range of weapons we don't need.

John J. Shanahan
Vice-Admiral, U.S. Navy (Ret.)
Chairman, Business Leaders
of Sensible Priorities
Ormond Beach, Fla.

SKILLED WORKERS: THE SEARCH SHOULD BEGIN AT HOME

Laura D'Andrea Tyson is right, of course, to point out the growing need for skilled workers in technology, even after we solve the Y2K problem ("Open the gates wide to high-skill immigrants," Economic Viewpoint, July 5). She may also be right in urging that we import such high-skill competence in information technology.

Let us not overlook the possibility, however, that we can educate enough of our own children, and reeducate enough of our adults, to fill this need. We are about to have a window of opportunity to seek out the brightest young people as we satisfy the need for workers for the Y2K problem. We need to ask ourselves the question—a hard one—as to what would happen if we allocated the necessary resources to raise the educational levels of the young people whose talents are now going to waste.

Experience makes clear that the effort to improve education would be expensive. The expense, however, can have a double result. We would not only

produce the human skills we need to run a contemporary technological society but would also improve the quality of elementary and secondary schools, and even community colleges and universities. That, in turn, would rebuild confidence that our public school system can help young people learn what they need to know and help adults to learn anew what they didn't have a chance to learn when they were younger.

Some private businesses might also develop their own training programs. If we begin to look at our own citizens, their needs, and their possibilities, we could then take a second look at the need to import high-tech workers.

Leonard S. Stein
Evanston, Ill.

Laura Tyson provided a solid argument in favor of increasing the H-1B visas for highly skilled immigrants. However, there is an issue that needs mentioning—the shortage of Americans studying information technology in college. This is a major concern for domestic employers, who must fill open positions with highly skilled immigrants. These immigrants often find that the United States offers something that their host countries do not: higher wages. The greater the income disparity in the host country, the greater the probability that the highly skilled individual will emigrate to a country that will offer him or her a higher wage.

Andy Seth
Torrance, Calif.

ONE U.N. AGENCY'S HIGH STANDARDS OF TRANSPARENCY

We would welcome an opportunity to discuss the issues that were mentioned in "The Net: How to head off big-time regulation" (Legal Affairs, May 10). The World Intellectual Property Organization (WIPO) is one of the U.N.'s 16 specialized agencies. It is not, as the article says, a "quasi-governmental group."

As for the conduct of the WIPO process on Internet domain names and their relationship to trademarks, this was initiated with the approval of WIPO's 171 member states. Each step of the process has been transparent, and WIPO has gone to great lengths to make participation possible by all interested parties, including governments, nongovernmental organizations, public-interest groups, and the private sector. WIPO also posted requests for comments on the Internet and received more than 1,000 reactions from

governments, intergovernmental organizations, professional associations, academies, and individuals.

Geoffrey
Assistant Director General

ASSISTED LIVING FILLS THE FOR MANY ELDERLY PEOPLE

There is a simple explanation for the "puzzling slowdown in nursing home demand" ("Who's caring for the elderly," Economic Trends, June 28). And not because elderly people are here nowadays. The reason is the reality which was made several years ago: many of the elderly need only a small amount of assistance or care. They do not need the comprehensive institutional care that a nursing home provides. This new awareness has led to the creation of more "assisted living" facilities tailored to the needs of elderly folks with good health but needing only some help with sight and assistance with meals and other daily routines, and wanting to live in a home-type environment.

A. F. K.
Rye, N.Y.

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BY STEPHEN H. WILDSTROM

IT'S A PHONE, IT'S A PALMTOP

Combo devices show promise, but are they ready for prime time?

One lump or two? That's the question facing designers and consumers at the dawn of a new era of wireless communications. Cell phones are beginning to handle data as well as voice calls, and handheld computers, organizers, and other devices can become much more useful if they gain wireless-communications capability. So does it make more sense to have a single super-phone that doubles as handheld computer, or do you want a phone and a discrete handheld to work separately and together?

I tested two very different attempts to deal with the question. The pdQ phone, from Qualcomm (619 587-1121 or www.qualcomm.com), is a digital phone with a 3Com Palm built in. The Starfish Clip-on Organizer from Motorola (800 331-6456 or www.starfish.com) displays the address book, calendar, and to-do list from your desktop information manager on a device that clips to a StartAC phone.

The pdQ phone indicates the strengths and weaknesses of the superphone approach. The phone, which will come on the market this summer as Qualcomm negotiates deals with carriers, is expected to cost between \$500 and \$800, depending on the service

plan. At a time when tiny phones are the rage, the pdQ is a bruiser by cell-phone standards. To accommodate a display just a bit smaller than Palm III's, the phone weighs 9.8 oz.

DATA GAP. There's also a big ergonomic problem: You can't read the display while holding the phone up to your ear. A headset is one solution, and Qualcomm supplies a combination earpiece/microphone. But at least in the U.S., these have been slow to catch on with cell-phone users.

On the promising side, the all-in-one design should, in theory, work as a phone and a modem for the Palm. A phone link would let you get E-mail, browse the Web, and exchange contacts and calen-

dar information with your desktop computer. Unfortunately, the digital networks that pdQ uses, such as Sprint PCS, are just starting to get data capability. The extent of phone-Palm integration will depend on which of the two pdQ models you have and just what services your cellular carrier offers. At worst, you may have to forgo checking your E-mail or surfing the Web, and stick to using your Palm address book to dial the phone.

The \$250 StartAC Clip-on comes with a different set of ergonomic and integration problems. The thick, credit-card-sized device, a very close relative of the Starfish-designed Franklin Rex Pro, attaches easily to most

A drawback is that organizer pushes the weight up by 50%. The half-inch thickness combined phone-organizer makes the once-almost-tactile StartAC a bulk when worn in its belt. Motorola insisted the Clip-on meet the same compatibility standards as the greatly increasing in weight in comparison with the Rex.

SMALL LIMITS. A bigger problem is that there is very little integration between the phone and the phone. The interaction is you can dial a phone from the address book. So while it's handy to be able to detach the Clip-on from the phone so you can use the phone while you're talking, it's not a lot you can do while they are attached.

As these gizmos mature and as wireless networks improve, the design and integration will get better. But there are limits. There's no way to get a data screen in a device that's as small as a phone should be. On the other hand, my phone should be able to handle larger data devices such as palmtops to browse the Web, fetch E-mail, and receive pages.

The solution

lie in technology being developed by an industry consortium called the Blue T Special Interest Group. Tooth uses low-power transmitters to connect devices, so that the palmtop your hand could use a phone hanging from your neck to check your E-mail. Practical applications of Blue T are probably still a year away, but this technology may be the key to letting handheld devices share each other's strengths, instead of building hybrids that do many things none of them well.



ONE PIECE OR TWO

◀ QUALCOMM PDQ PHONE

Description: Cell phone with built-in Palm handheld
Network: CDMA digital
Price: \$300-500, set by carrier
Weight: 9.8 oz.

MOTOROLA STARFISH CLIP-ON ORGANIZER

Description: Organizer attaches to StartAC phone
Network: Analog, CDMA or TDMA digital
Price: \$250 plus phone
Weight: 2.3 oz., 7 oz. with phone

DATA: MANUFACTURERS

any StartAC phone. You can enter a bit of data by using a stylus to tap a clumsy on-screen keyboard. But for the most part, the Clip-on, like the Rex, is intended to display data downloaded from a desktop program.

One real strength is that Starfish's TrueSync software is designed to transfer data among multiple programs and devices. You can, for example, simultaneously sync a Clip-on, a Palm, Microsoft Outlook on the desktop, and a Yahoo! Calendar on the Web.

ke to get to the office as early as possible.

ore anyone else. **That's My time.**

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nd Breakfast? Hey, I can fit that in anytime.

ven after the troops invade.)

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FIRST LADY, AND NO SECOND FIDDLE

It may be unfortunate for Hillary Rodham Clinton that she has chosen to test her political wings just as a long-awaited second volume of an Eleanor Roosevelt biography hits the bookstores. For the book highlights the stark differences between Clinton and her role model, with whom, the White House has admitted, she had imaginary conversations.

Early on, Clinton had sought to carve out an independent policy role, but she withdrew from public activism after her health-care plan bombed. ER, as biographer Blanche Wiesen Cook calls her subject, took another approach. In *Eleanor Roosevelt: Volume 2, 1933-1938*, Cook describes a First Lady who, undaunted by failure and discord, ran a "parallel administration" alongside the President's, making major contributions to the New Deal. Seeking political office for herself seemed unnecessary.

At 686 pages, this volume is a comprehensive look at just five years in the life of a very busy woman. "She wrote, she published, she traveled, she lobbied, she joined grassroots organizations and radical communities with a zeal that sparked controversy everywhere," its dust jacket proclaims. The book itself, though, is seldom so succinct, and its detail can try the reader's patience. One hopes that volume three, which Cook is writing now, will be more focused.

As the author tells it, Eleanor often prodded Franklin's conscience, and he turned to her to "warm up," or build support for, politically dicey issues. And if she disagreed with her more cautious husband, she often said so publicly. Sometimes, the wily Eleanor even bypassed opponents in the Administration. In organizing the Arthurdale housing community in destitute Appalachia, for example, she enlisted the support of FDR's close aide, Louis Howe, even though the project was supposed to be

administered by Interior Secretary Harold L. Ickes. Ickes complained that ER and her supporters were spending money "like drunken sailors." FDR privately agreed, but Eleanor prevailed, and the houses were built with the modern amenities that she chose.

Cook's narrative is most compelling when it describes ER's pursuit of social equality. In one of the most moving scenes, the author describes how, at a 1938 civil rights meeting in Birmingham, Ala., Eleanor refused to sit in the whites-only section as the state's segregation laws required. Instead, she placed a folding chair between the two sections and carried that chair with her for the four days of the conference.

Such zeal, Cook conjectures, was partly a reaction to the isolationist State Dept.'s mid-1930s requirement that she not speak out against Hitler's treatment of the Jews. Her silence was "grievous and prolonged" on this issue, says Cook, yet ER was among the first to make the connection between the fascism that was brewing overseas and racism at home.

There is no doubt that Eleanor Roosevelt was a remarkable woman, but to hear her feminist biographer tell it, she could do little wrong. In contrast, FDR often comes off as a craven and duplicitous politician. He failed to speak out for a doomed anti-lynching bill that ER championed because he didn't want to challenge the Southern leadership of his party. Fearful of losing Catholic support in the labor unions, he ignored Eleanor's desperate entreaties to intervene on the side of democracy in the Spanish Civil War. Could it be, perhaps, that FDR was more attuned to the realities of the time—that it was necessary

to make those compromises to save the controversial New Deal?

Volume 1 of this biography coaxed some powerful notions. Cook suggested that ER's political growth was linked to her feelings of abandonment when she discovered Franklin's affair with Lucy Mercer. That, along with the exclusion from FDR's male circle, encouraged her to develop ties with a group of politically active women. Her political empowerment deepened with her self-discovery, particularly through her relationship with reporter Lorena Hansberry.

In Volume 2, though, Cook explores the connection between Eleanor's trouble-fraught private relationships and her growing activist popularity. And while there is much interesting in the book, it is a compelling read. A vast amount of material is haphazardly thrown together with only the thinnest of transitions.

Even when Cook offers more analysis, she often fails to back up her

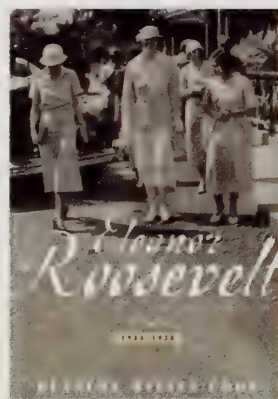
arguments. For example, she suggests that husband and wife often worked in concert, complementing each other: While Franklin sought to build support for the politically possible, Eleanor pushed for the radical end of New Deal thinking. But it's not clear the two actually did coordinate their efforts. At one point, for instance, he urged her to "warm up" in the prospect of U.S. entry

in the World Court, then didn't push for the necessary legislation. So what was the warm-up? Moreover, FDR often ignored ER, for reasons Cook fails to explain.

Still, what comes through clearly is ER's fearlessness. As 2000 approaches, it's hard to fathom how radical it was for a President's wife in the 1930s to warn that women who didn't work outside the home would become "autonomous." As Hillary Clinton hits the bidding political hustings in New York, perhaps she'll want to get in touch with ER for a brush-up course. The less you have a strong sense of purpose and principle, sometimes you can defeat a countervailing political tide.

BY SUSAN B. GARLAND

Garland covered the White House during Bill Clinton's first term.



ELEANOR ROOSEVELT WAS REMARKABLE, BUT TO COOK, SHE COULD DO LITTLE WRONG

JEFFREY E. GARTEN

THE NBA NEEDS TO DO SOME GLOBETROTTING



VIEWPOINT:
Marketing basketball abroad means turning a page in the likes of Disney, Sony, and P&G

Despite last month's exciting playoffs, National Basketball Assn. Commissioner David J. Stern shouldn't be smiling too much. Even as attendance bounces back from this past season's six-month NBA shutdown over players' salaries and the league's gross revenues rise steadily (up to \$1.7 billion in 1998), operating profits have declined from \$195 million in 1993 to a loss of \$25 million last year. The new contracts capping players' pay will definitely help, but Stern has to do something more, and his biggest moneymaking opportunities could lie abroad.

Only 10% of gross NBA revenues currently come from overseas. Stern says basketball sells itself, but interest in countries such as Spain and Argentina is actually waning, according to sports reporters, who worry about the game's appeal without Michael Jordan on the scene. Nor should the competition be underestimated. Soccer is the world's most popular sport—the last World Cup series drew more than 3 billion viewers. Vying for the attention of young male TV viewers are local sports, MTV, and computer games.

Other formulas for making money from sports exist, too. For example, the NBA owns the teams—"content"—but Rupert Murdoch is making a bid for both content and distribution by buying teams, TV stations, cable networks, and satellites. These days, moreover, few companies can sew up foreign markets only by distributing their products from a U.S. base, as the league is trying to do.

The NBA is not just sports but entertainment and consumer products. It should therefore take a look at Walt Disney Co., which has been building theme parks abroad; or Sony Pictures Entertainment, which doesn't just sell Hollywood movies but is setting up studios for European film production in Berlin; or Procter & Gamble Co., which manufactures toothpaste and shampoo overseas.

For the NBA to devise the right global strategy, it should learn from companies that are defining themselves not just by what they do now but by how they can tap into the full range of their customers' desires using multiple distribution channels. Wal-Mart Stores Inc. is preparing to provide low-cost banking to its budget-conscious customers. Amazon.com Inc. is offering its book buyers everything from music to Sotheby's cyber-auctions. Martha Stewart offers her loyal fe-

male audience cooking, gardening, and other lifestyle products through books, magazines, catalogues, Kmart, TV, and the Internet.

To be sure, Stern hasn't been idle. He had an early triumph in 1992, when a U.S. Olympic team that included Michael Jordan, Magic Johnson, and Larry Bird won the gold medal. The league's franchises have expanded into Canada; played games in Mexico, Italy, Japan, and elsewhere; and sponsored basketball clinics in Africa and Asia. The NBA employs more than 100 people in nine countries who license everything from TV programming to T-shirts. Through relationships with 105 broadcasters around the world, it has beamed games to 650 million households in 199 countries. And the NBA is promoted everywhere by world-class companies like McDonald's, Nike, and AT&T.

HOT STREAK. But the NBA's approach to globalization is conservative, requiring little capital and incurring few risks. It needs to be more aggressive, especially while it is still hot. In the first instance, that would entail direct support for basketball teams abroad. But the league should also capture the broader lucrative market for male teenagers around the globe who relish the speed and combative nature of the game, not to mention the minimal requirements for space, equipment, and teammates.

Stern & Co. could buy and better commercialize teams in such places as Mexico or China (where 100 million young men play basketball). They could make NBA.com a cyberspace network, not just for basketball but for all sports. They could join forces with Madison Square Garden and Bechtel Group Inc. to build and run state-of-the-art sports arenas abroad. They could work with Time Warner Inc. to produce sports videos in multiple languages, or with Nintendo Co. to create computer sports games. They could run for-profit summer camps for kids from Kansas City to Kuala Lumpur.

During Stern's 15 years at the helm of the NBA, the average value of a team franchise increased from \$12 million to \$200 million, and the NBA has become a global brand. But even the commissioner says, "Our biggest challenge now is to figure out who we are." If Stern recognizes that a successful global strategy requires bold moves, he will heed the advice of Napoleon: "If you are going to take Vienna, take Vienna."

Garten is dean of the Yale School of Management. A former investment banker, he was Under Secretary of Commerce for International Trade in the first Clinton Administration. (jeffrey.garten@yale.edu).

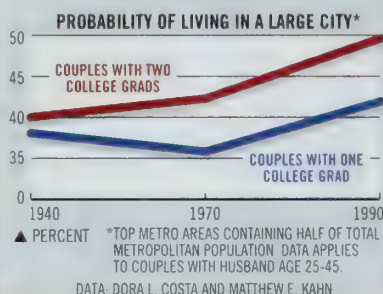
BY GENE KORETZ

THE POWER OF POWER COUPLES

They give cities a competitive edge

Call them "power couples"—young or prime-aged married couples, in which each spouse is college-educated and career-oriented. Over the past 30 years, such couples have become a growing force in labor markets. And as a new National Bureau of Economic Research study by Dora L. Costa and Matthew E. Kahn suggests, their increasing incli-

COLLEGE-EDUCATED COUPLES ARE BIG-CITY BOUND



nation to settle down in large metropolitan areas may have important implications for the locational decisions of businesses and the growth of cities.

Several trends lie behind the advent of the power couple: the increasing labor-force participation of married women, rising demand and pay for well-educated workers, and the huge surge of women into college and once male-dominated professions. In 1940, only 18% of female college grads married to a college-educated spouse age 25 to 45 had jobs. By 1970, the share was 39%; by 1990, 74%. Meanwhile, the percent of marriages with two college grads rose eightfold from 2% in 1940 to 16% in 1990, and that of couples with one college grad tripled from 7% to 20%.

The tendency of working wives to defer to their husbands' job needs has also waned. The rise in women's relative wages, the high incidence of divorce, and the growth of feminist ideology have affected women's attitudes. The study notes that 49% of wives in dual-career households surveyed in 1998 classified their careers as equal in importance to those of their husbands.

The upshot has been a growing tendency of highly educated couples to locate in large cities, which offer more

job opportunities for both husband and wife. The authors' analysis of Census Bureau data indicates that the share of college-educated couples living in large cities rose from 42% in 1970 to 49% in 1990 (chart)—and from 10% to 35% in the case of those with working wives.

By contrast, only 14% of college-educated couples with a nonworking wife resided in big cities in 1990, hardly more than the 13% of non-college-educated couples. While rents in large cities are higher than in smaller cities, the study finds that the higher wages paid to skilled workers in large cities plus the additional income from two paychecks more than offsets the rent difference (which makes smaller towns more attractive to one-worker couples).

Looking ahead, Costa and Kahn believe the tendency for power couples to locate in large metropolitan areas will intensify—a trend that is likely to affect business-location decisions. Already, surveys indicate that a spouse's employment has become a major reason that workers resist relocation. As a result, smaller cities—especially those lacking amenities such as a good climate—may have a hard time attracting and retaining skilled workers.

As for power couples, their relative economic position could actually improve as more of their peers join them in urban locales. In today's global, information-based economy, greater contact between highly skilled individuals in big cities seems to foster the kind of innovation and learning employers prize.

CEOs, OPTIONS, AND HAPPY TALK

News disclosure is pegged to price

Do top executives manage the disclosure of news about their companies in ways that enhance the value of their stock options? A recent study by David Aboody of the University of California at Los Angeles and Ron Kasznik of Stanford University suggests that all too often the answer is yes.

The two graduate business school accounting professors analyzed some 2,000 CEO stock-option awards from 1992 to 1996 by 572 large companies that make such awards on nearly identical dates every year. They found that the pattern of stock-price movements and management-earnings forecasts issued around the time of the awards differed significantly from the pattern at other times during the year. Specifically, managers

tended to disclose bad news before awards became effective and to good news until after the award.

Either tack, of course, is likely to result in a lower stock price than otherwise be the case on the day an option award—and nearly all stock options carry a fixed exercise price on the day they are awarded. With now averaging new stock options well over \$1 million a year, that's big bucks. The researchers estimate every \$1 reduction in an exercise price raises the value of an average CEO's 65,000 options by \$44,200.

Playing with disclosure dates, Kasznik, seems a "gray area" but stockholders may not take to it. One way to minimize the practice, he suggests, might be to set dates after regularly scheduled earnings announcements.

BOSTON'S RED-HOT OFFICE MARKET

Its prime building rents are so

Owners of office buildings in business districts around the nation are riding high. Cushman & Wakefield Inc., the commercial real estate company, reports that 15 of the 30 markets it follows had double-digit increases between the first quarter of 1998 and 1999. Meanwhile, the national downtown vacancy rate fell from 10% in the first quarter of 1996 to 10%.

The hottest market: Boston's downtown business district, which boasts a vacancy rate of just 5.2%. With a 27% increase over the past year, Boston's Class A (high-quality, prime location) rents of \$47.93 per square foot are the highest in the nation, edging out midtown Manhattan (\$47.78) and San Francisco (\$46.08), the only other two cities where prime rents exceed \$40 per square foot.

While downtown rents in the U.S. have hit a record level for the 1990s, Cushman CEO Arthur J. Mirante notes that they're still too low to spur much new construction—which means they probably headed higher.

DOWNTOWN OFFICE SPACE GETS TIGHT



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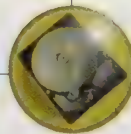
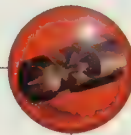
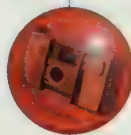
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D A N A L O G

**TEXAS
INSTRUMENTS**

INNOVATIONS FROM THE Telecom Corridor

Opinions differ sharply about the steady hum emanating from the Telecom Corridor® in Richardson, Texas. While long-time locals might assign it to an increasing volume of traffic, high-tech execs half-jokingly contend it is a mass consumer mantra: *"Smaller, Cheaper, Faster. Voice, Data, and Video."*

Indeed, it's not just business and industry which are eager to get on board the bandwidth bandwagon, both wireless and wired. According to the market analysis firm Dataquest (www.dataquest.com), the rise of the sub-\$1,000 personal computer has helped increase the penetration of U.S. households to 50%, up from 27% in 1995. The PC is rapidly becoming a standard household appliance, with set-top boxes expected to follow-on with secure electronic commerce, entertainment, and communications to the "wired hearth."

In fact, more than 3.4 trillion e-mail messages crossed the Internet in this country last year, according to eMarketer Inc. The 263 million users of e-mail boxes worldwide are discovering the possibilities of integrated data, voice, and video.

"A Crescendo of Creativity"?

"That constant buzz in the Corridor is the

sound of growth, the crescendo of creativity," insists Ron Robinson, President of the **Technology Business Council (TBC)**. The Richardson Chamber of Commerce affiliate is comprised of 200+ companies and a board with 24 CEOs as directors.

Undeniably, the **Telecom Corridor®** (www.telecomcorridor.com), marking the 10th year of its official designation, deserves credit for helping shrink the world of communications. The more than 600 high-tech companies making up America's largest cluster of telecommunications firms have created thousands of jobs locally — spawned hundreds of thousands more worldwide — and made



Telecom firms make up 50% of the 600-plus high-tech companies in the Corridor.

are information technology (IT) and software firms, and the balance are semiconductor and other high-tech businesses.

Based on past years' growth, another 20

fledgling firms the mix in 19

In the fierce for scarce engineering talent, new companies, post-stroke, and competitive edge in technological environments, the Telecom Corridor® ex

both a new bo

and recent noteworthy achievements.

Meanwhile, the Telecom Act of which signaled massive deregulation and spurred mergers, acquisitions, and new alliances continues to transform the telecom in

STARTech

Accelerating High-Tech Success

For the "usual" reader — non-nerd, non-techie, unwired, and Internetless — of *The Richardson (TX) News*, the June announcement that STARTech had added its eighth start-up company in 18 months most likely elicited a big yawn.

Hopeful entrepreneurs and innovation-hungry telecommunications firms, however, probably cheered in unison. The hurrahs weren't audible in California's rip-roaring Silicon Valley, but receivers in many high-tech and financial circles are finally picking up a clear signal: *Venture capital and fresh ideas find common ground in the Corridor.*



STARTech (www.startech.org), the high-tech incubator in Richardson's Telecom Corridor®, is actually a *for-profit* corporation conceived by the Technology Business Council and previously owned by the Richardson Chamber of Commerce. There are more than 25 stakeholder partners, (tech and service provider companies), each paying \$25,000 a year for five years to fund the operations.

The stakeholders also provide expertise, along with evaluation and due diligence on business proposals. In return, they get a piece of the estimated 4% to 5% equity STARTech holds in start-ups. Clearly, this is an investment, not

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In 1998, WorldCom acquired MCI, a 26-year veteran of Richardson, in a \$40 billion takeover. Alcatel USA bought DSC, located next door in Plano, for just under \$4 billion. *And the beat goes on in 1999.*

Even as M&A activity escalates, each company continues its breakneck race to meet the demands of the Internet Revolution and the Wireless Generation, whether they are carriers, vendors, entrepreneurs or consumers. The recent innovations are as varied as the players are.

In the Beginning, There Was TI...

Texas Instruments, Inc. (www.ti.com), which expanded from Central Dallas to Richardson's southern border in 1956, has grown into a dominant semiconductor manufacturer with 10,000 employees in North Texas. Still, it rightfully commands considerable credit for its cellular contributions.

"The defining moment was when telecommunications went from analog to digital," says Gilles Delfassey, Vice President of TI, Worldwide Wireless Communications. "Our DSPs (digital signal processors) are in more than 65% of the digital cell phones in the world," contends the Frenchman, a 22-year employee who has lived in Richardson for five years.

"The reason wireless equipment has shrunk in size — from 500 grams to below 80 grams — and price is because of innovations in the IC (integrated circuit) industry," he says.

TI's direct customers in the Corridor, telecom giants Ericsson, Nortel Networks, and Alcatel, took additional notice this spring when TI announced the industry's first digital baseband product with transistor feature sizes of 0.15-micron effective or 0.18-micron drawn. *Translation?* A leap in integration and performance offering

improved power, cost, and space savings. Consumers will be able to talk longer and preserve greater standby times than currently available.

The next-generation chip-scale packaging — complete systems only slightly larger than the silicon itself — will help wireless customers move seamlessly into an era of converged delivery: voice, data, and video.

The 0.15-micron device is being manufactured at the Kilby Research and Development Center, part of the \$5 billion, 10-year building program that began with an expansion of the DMOS 5 wafer fab facility in 1993. *Next up?* DMOS 6 by 2002, which will take the size of a wafer, the silicon ingot on which all chips are fabricated, from 200 to 300 millimeters.

Land of the Giants?

Heavyweight **Nortel Networks Corporation** (www.nortelnetworks.com), with more than 9,000 employees in the Dallas area, (75,000 worldwide), upped the ante for innovation in June. It unveiled an Internet Telephony strategy for enterprises that builds on its market leadership in enterprise wide area network (WAN) switching, business communication systems, call centers, and messaging.

Nortel Networks introduced 11 new products and numerous enhancements to classic products that unify the worlds of telephony and data. The new solutions are founded on its Internet Communications Architecture (Inca), Internet Protocol (IP) architecture based on open stan-

dards and offers a choice of communication paths for evolving data and business communication systems.

We "are driving an Internet + any paradigm that merges the simplicity, and connectivity of the rate Internet with the reliability and capacity of the classic business communication systems,"

Long, President of Enterprise Solutions, says. "Prises will 'realize the of the 'Next Generation net' today... employ ductivity, enhanced relationships, and new economics."

Two of Nortel Networks' four major business units, Wireless Solutions and Enterprise Solutions — have global headquarters and plants located in the Corridor. Also has a large contingent business unit of the Enterprise Solutions line of business, tel Networks' leadership in local networking, packet-

high-speed access technology solutions clearly evident this past spring was announced:

- \$4 billion worth of carrier contracts in 100 days plus major new customers
- Succession Networks, the first non-proprietary solution enabling carriers to transition from circuit to packet networks, allowing the operators to leverage their billion-dollar investment in their network infrastructure.

Matt Desch, President of Nortel Networks' Wireless Solutions, eloquently observed that some cities, like Dallas and Richardson suburb, which served as



Texas Instruments DSP-based Open Multimedia Application Platform will be used in Nokia's future Wireless Information Devices.

STARTech

charitable contribution.

It's also an opportunity for those companies to get a "first look" at breakthrough products from smaller, more nimble firms that enhance existing technology and increase the majors' profit margins.

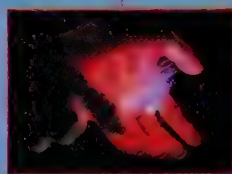
"Eighty percent of the 600-plus high-tech companies in the Corridor have less than 50 employees," notes Ron Robinson, President of the nonprofit TBC. "Those kinds of companies are traditional start-ups."

"We definitely see a synergy," agrees Ron Martin, EVP-Planning & New Development at Fujitsu Network Communications and a TBC Tri-chair-

man. "There are start-up companies in this area that provide equipment or skills that we are able to use for specific projects. The environment (here) is a fertile ground for that kind of arrangement."

With Thanks to Buffy's Bladder...

Not so in 1996. That was the year Tom Anderson, walking his dog Buffy, had a chance to meet a neighbor at an evening meeting with his neighbor and friend Frank Kozel. The curbside conversation between the two high-tech titans led to the formation of STARTech and a \$4 million seed



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Today, Nortel Networks is building a better Internet. Our goal is simple: unify voice and data, wireline and wireless, public and private networks to create a more efficient and reliable Internet. An Internet that can help service providers and enterprises maximize their revenue potential.

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For more information on how we can help your business harness the true power of the Internet, visit us at www.nortelnetworks.com

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torical trading hubs and evolved into information centers, "are now changing into super-commerce clusters built around technological centers.

Dramatic Change & Growth

In 1957, Collins Radio followed TI to Richardson. In 1968, the U.S. government's landmark decision allowed manufacturers to sell telephone devices to businesses. MCI Network Service opened a Richardson facility in 1972 to be near a major supplier, Rockwell International Corp. Rockwell would acquire Collins the next year and, in 1991, sell Rockwell Transmission to Alcatel Network Systems Inc. Northern Telecom (now Nortel Networks) arrived in 1978, and Ericsson relocated to the city in 1983 with its switching, cable, and lightwave operations.

City leaders recognized in the late '60s that courting high-tech companies could lower taxes — currently at 44.3 cents per \$100 valuation. But the real push for a telecom concentration was spurred by the tough years of the 1980s, when Texas energy, banking, and real estate hit on hard times. Meanwhile, Richardson's economic development strategy was on a determined roll.

A tax roll, too. The 1999 preliminary property value is \$5.9 billion, up 13.5% over last year. The city's share of state sales taxes on high-tech products also adds to the coffers that accommodate citywide landscaping, extensive park systems, senior citizen, transportation, safety, cultural pro-

grams, and city services.

Gone are the two-lane blacktops, the once-sagging Downtown, the horse barns, the cow pastures, and most of the fields of gently waving milo and "King Cotton" that once characterized the sleepy suburb on Dallas' northern perimeter. They have been replaced by waves of high-tech companies, interlocking campuses of low-rise buildings and soaring office spires, impressive research centers, and fledgling entrepreneurial start-ups.

And people. Lots of people. The American Electronics Association (AEA) recently ranked Texas No. 2 behind California in high-tech jobs with 376,000, but No. 1 in high-tech job creation (1990-97). And in the Lone Star State, Richardson is practically a "shooting star."

While the city is home to 85,000 residents, it sports a workforce of about 87,000, including more than 50,000 high-tech employees. The North Central Texas Council of Governments

(NCTOG) estimated Richardson's daytime employment (minus TI's Dallas campus) had experienced the largest percentage increase (23.3%) among the 11 largest D/FW area cities between 1995 and 1998. By 2010, employment is projected at 106,100, while population will linger around 86,450.

Location & Connectivity

Obviously, the Telecom Corridor® is no anonymous office-park-on-the-prairie. The

trademarked, T-shaped area includes 10 square miles of Richardson as well as headquarters of Texas Instruments, in Dallas. It straddles U.S. 75, north of I-635 (LBJ Freeway) and extends along the east and west flanks of the new Stateway 190 (George Bush Freeway).

About 17% (4.7 square miles) of Richardson land is vacant. About 100,000 plus acres around the U.S. 75 - Stateway 190 crossroads is where most of the immediate growth is expected. About 3.5 million square feet of new commercial construction has been announced, started or completed in the past year, including Petroleum Corp.'s 500-acre mixed-use development, Galatyn Park Urban Center.

Nortel Networks, which addresses all markets for digital cellular, PCS, satellite and broadband wireless access networks, will anchor the Galatyn project with three new buildings containing a total of 500,000 square feet. (It already has 2.5 million square feet in the area).

Galatyn will include the Renaissance Hotel by Marriott, a 336-room luxury hotel and conference center. Also on site, the Convention Auditorium, a 1,500-seat performing arts center with a state-of-the-art corporate conference hall.

By 2002, the Dallas Area Rapid Transit light-rail line will be zipping through the heart of the Corridor. Workers and commuters will be whisked 17 miles to Downtown Dallas for Arts District events; hockey and basketball games to be played at the new American Airlines Arena now under construction; or to a technical conference at the Convention Center or the Information Center.

"We are working hard on transportation infrastructure, connectivity, and quality of life," says Richardson Mayor Gary Slagel, a former TI employee and, in the past eight



Nortel Networks' growing campus flourishes as the geographical heart of Richardson's Telecom Corridor® straddling Interstate U.S. 75.

STARTech

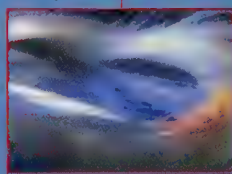
generated by 11 venture capital firms, which currently manage more than \$3 billion in committed capital.

The men realized Richardson had no "Breakfast Club" like near Boston, no "Band of Angels" like Silicon Valley's — small groups of wealthy capitalists who founded and sold companies or supplied funds and advice to the next generation of entrepreneurs. Together, they wondered why so few new companies were born in an area dense with high-tech expertise and managerial talent.

Aschenbrenner helped build Danray Inc., which Northern Telecom (now Nortel Networks) bought

in 1978. He founded Intecom Inc, took it public and sold it to Wang in 1984. He'd been a VC force for more than a decade. Korel is credited with building the digital fiber-optic network at MCI Communications Corp. before retiring after 15 years in 1995. Both realized something needed fixin'.

"In terms of interest, stakeholder participation, VC work, and the Mentors program, I think we actually exceeded their initial expectations," says Matt Blanton, President of STARTech. "The level of cooperation between companies has been a surprise. Companies that are fierce competitors actually collaborate and cooperate under the STAR





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Like many high-tech industries, telecommunications is changing rapidly – and Fujitsu is proudly at the forefront. Fujitsu's solutions play a leading role in the advanced telecommunications services offered worldwide. As the industry evolves, our cutting-edge technology will help our network service provider customers continue to offer powerful services to their business and residential customers. Our products consolidate all traffic types – data, voice and video – onto a single, high-speed fiber-optic backbone for a simpler, more cost-effective network. This results in ultra-fast high-bandwidth Internet connections, powerful local area networking capabilities and other bandwidth-intensive solutions that prepare networks for the next century.

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himself a veteran of three high-tech startups. SH 190 will connect Richardson to DFW Airport in stages: To the Dallas North Toll Road in December; to IH 35 in 2000; and to IH 635 in late 2002 or early 2003.

Critical Corridor Elements

Executives at Samsung Telecommunications America, Inc., which researches, develops, and markets telecom and datacom systems and products, and Ericsson, a pioneer in the development of wireless communication systems, practically echo one another in describing the Corridor's drawing powers:

- Easy access to reliable domestic and international transportation systems — for personnel and freight;
- A low cost of living;
- A cluster of high-tech companies serving as potential customers, suppliers, and sources of new technology, and technical talent.

"Before coming here in 1996, we reviewed New Jersey, Denver, San Diego, and The Netherlands," explained Jeong Han Kim, President of STA. "The Central Time Zone is a logistical advantage in serving our U.S. and Canadian customers (carriers) coast-to-coast.

"Dallas and Texas also are among our strongest U.S. markets, a high growth area with lots of educated and affluent people on the move; people who have adopted wireless technology," adds Peter Skarcynski, VP-Sales & Marketing, Wireless Terminals.

Samsung (www.samsungtelecom.com), which employs more than 350 people in the Corridor, provides wireless phones, terminals, wireless communications infrastructure systems, network products, and digital key phones. STA was the first to introduce an Internet-browsing wireless phone in 1997 and the first to incorporate voice-activated into a Code Division Mul-

ti-ple Access (CDMA) handset at an attractive price point.

In 1998, it received the "Infrastructure Product Innovation Award from the CDMA Development Group for its PicoBTS™ (base transceiver station), a microcell unit that is smaller and less costly than the minicell or macrocell counterpart.

In May, Teligent® announced it will deploy Samsung's STARacer™ ATM (asynchronous transfer mode) switch to support switched and permanent virtual channels and comprehensive network management.

"Anywhere, Anytime, Any Way"

Ericsson, (www.ericsson.se/us) which has 3,000 of its 8,000 U.S. employees in Richardson, is involved in wireless infrastructure business, wireless phone manufacture and sales, central office switching equipment and service, components manufacture and sales, private radio systems business and data communications business.

"We are positioned to launch the telecom industry into the Next Generation of Internet," explains Keith Shank, Director-Strategic Marketing and Business Development. "The driving element will be *mobility*.

"The Internet is a powerful personal and business tool, but...in most cases is limited to the length of the cord connecting to the wall outlet," Shank observes. "In the very near future, wireless operators using Ericsson systems will be able to offer Internet access, Anywhere, Anytime, Any way."

As a leader in Internet Protocol (IP

telephony, Ericsson is poised to bring true open platforms to bring switched systems into the world of communications. The company has developed a network architecture that uses ATM that allows existing circuit-switched networks to implement an IP core without outdating their existing hardware.

Jack Walters, Senior Vice President, Network Engineering at **MCI WorldCom** (www.worldcom.com), says, "We are a consumer of a lot of these innovations. We drive our technology vendors hard. We do research and development. We search for technology that can be used in specific applications of networks as well as in general. We are the only carrier who can provide service from end-to-end from the United States to major financial centers in Europe.

"We are pushing photonics dense division multiplexing (DWDM), having been in that area of optics in 1992," V-



Carriers, engineers, and executives work to meet consumer demand for wireless and wired data and video — anytime, anyplace, anywhere.

noted. "We are now working on systems that will provide 160 wave lengths beyond, which will push (down) the curves of our system. We can use embedded fibers to provide much capacity on our existing systems."

UTD-Corridor Alliances

The hands-down leader as the local multiplier of personnel with advanced degrees is the University of Texas at Dallas (Utdallas.edu), once dubbed "the university the Corridor built." Its Erik Jonsson School of Engineering and Computer

STARTech

umbrella," says the former R&D manager at Hewlett Packard's Convex division in Richardson.

More than 425 applications have been received since October 1997. Those that don't pass the stringent review are referred to individual stakeholder firms interested in working with the smaller company, as well as to mentors with a keen interest.

STARTech helps with business plans, introductions to leading technology firms in the Corridor and North Texas; provides start-up capital and a broad array of services — accounting, banking, legal, public relations/marketing, real estate, and recruiting.



Sequoias, Greenbacks and a City Landlord

Terry Rock, a partner in CenterPoint Venture Partners, is co-chair of a TBC committee that created STARTech. He is one of the city's telecom heavyweights to giant sequoias, the *Business Dallas*, "There was a need to grow more sequoias. If you're trying to plant a seed, you have to have the proper nutrients to make it grow..."

Of course, the primary nutrient is greenbacks, whether it is VC money, angel largesse, investment bank loan, institutional financing, or traditional bank loan. For now, the first seed has attracted players like Sevin Rosen Funds, Si-

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SAMSUNG

offers degrees focusing on telecommunications, microelectronic device design, and computer science. UTD, on track to becoming the first university to offer bachelor's and master's degrees in telecom engineering, awards more than 300 engineering and computer science degrees annually. Students in these programs make up 10% of the total enrollment of 9,518.

University of Texas at Arlington and Southern Methodist University in Dallas also have engineering schools. Add to the traditional resources, the computer science, and business management programs at the University of Texas in Denton, Texas Tech University, Dallas State University, Texas Christian University and Wesleyan in Fort Worth.

Not only scholars, but venture capitalists are finding their way to UTD's 500-acre campus.

The legislature just increased its biennial appropriation by 17.3%, or \$13.6 million, to \$92.3 million in state funds. Leaders, however, are looking for a one-time appropriation of \$100 million to double the size of the engineering school and to expand the flourishing School of Management to meet the university's appetite for engineers and fresh-faced managers.

"We did well, but we can always do better," says UTD President Franklyn G. Wright. "And we are doing well in (Washington) D.C., particularly in federal grants."

In 1998, UTD received nearly \$15 million in funding for research projects, a 6% increase from 1997. The bulk of that funding, which propelled 211 projects of 237 proposals submitted, came from the U.S. Government. Corporations contributed 9%, a figure that is rising.

Financial fuel and intellectual camaraderie are attracting top educators like Dr. Imrich Chlamtac. The world class scholar in networking and communications arrived at UTD in 1998 from Boston University and is now heading the new Center for Advanced Telecommunications Systems and Services (CATSS). It is only one of at least eight high-tech UTD research centers ranging from quantum electronics, digital signal processing, and high energy physics to CAD visualization, optical communications, and photonics.

Chlamtac, a former Fulbright Scholar and Digital Equipment Corporation employee, is a Fellow of the premier technical societies, a telecom industry icon whose vision is to transform UTD into a "telecom powerhouse. (I) came to the 'cradle of telecom' to help the industry grow."

CATSS will span the range of telecom knowledge — hardware, communications, transmission modalities, algorithms, systems architecture, software, and applications. A major quest is bandwidth on demand, the ability to move huge amounts of data over fiber-optic networks.



Among the Corridor's soaring spires, interlocking campuses, R&D centers, and small start-ups is USDATA's office tower.

Pressure, Pressure, Pressure

"We all put a lot of pressure on UTD to provide strong engineering curriculums and to bring in professors who have strong backgrounds in photonics and development research," concedes Ron Martin, a Tri-chairman of the TBC and EVP-Planning & New Development at Fujitsu Network Communications (www.fnc.fujitsu.com).

Fujitsu arrived in the Corridor in 1980 to supply microwave equipment to MCI, 10 years before UTD enrolled its first freshman class. Now a major manufacturer of fiber-optic network transmission equipment, the firm has grown to 750,000 square feet of office and manufacturing space at a 100-acre facility employing 75% of its 2,400-employee U.S. workforce.

"The challenge of finding sufficient numbers of talented engineers has slowed our growth, but not resulted in significant delays to product rollouts," Martin continued.

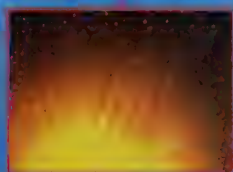
Fujitsu, committed to developing systems permitting more conversations on less infrastructure, introduced its 10-gigabit per second system two years ago. Ten gigabits represents 129,000 voice conversations. Within 36 months it expects to offer carriers a 40-gigabit system. "The fiber cable in ground today is not actually capable of supporting some of the high data rate transmission capabilities required," Martin says. "We may have to increase that 8,000 times by the year 2010...to support such applications as 'telepresence,' an ultra-realistic 3-D video of a person or object which quite literally appears in the room as a holographic image."

In June, Fujitsu introduced a tunable laser to address the problems of nonlinearity with copper cable and even some fiber cable. Researchers, limited by how fast they can change the silicon clock speed, are turn-

ARTech

Bank, Interwest Ventures, Austin Ventures and, from STAR Ventures Management (Germany/Israel). The organization's offices, now on the Alcatel USA campus, will change dramatically by the end of 2000. STARTech is expected to move into a \$3 million, 40,000-square-foot, high-tech facility on 6.5 acres leased from the University of Texas at Dallas.

The landlord, however, will be the City of Richardson, or perhaps, the citizens. The voters approved the project as part of a \$78 million bond issue in December 1997. In a high-tech community, it is seen as a "neighborhood improvement."



Photonics Initiative

In October 1998, STARTech boldly announced the Photonics Development Center (PDC), the first of a series of major initiatives to create clusters focused on specific markets. In the wings? Wireless and Internet-related development centers.

Richardson wants to be a driving force in photonics, an optical communications market variously projected to be worth \$15 billion by 2004. Photonics is the transmission of information via light — colors of light, and packets of light — one example being fiber optics.

High bandwidth requirements for Internet and

ing to wave division multiplexing to launch light down a cable.

(The industry) "can put 40 different colors of light down a single fiber and send 10 gigabits on each," Martin explained. "Take a filter and combine them and that creates 400 gigabits, increasing the capacity of the fiber without changing the clock speed of the multiplexer."

Martin believes the projected timetable to arrive at two to five terabits of information on a single fiber is:

- 2000 — 40 to 80 channels of different light over a single fiber;
- 2001 — Able to decrease the spacing between channels by half from 100 to 50 gigahertz spacing to accommodate 160 channels over the same fiber;
- 2005 — 640 simultaneous channels down a single fiber, but still length dependent.

Alcatel USA (www.usa.alcatel.com), with 7,000 employees in the Corridor and \$2.5 billion to \$3 billion in annual revenues, is no slouch in the race for innovation either.

The company builds next generation networks to deliver integrated, end-to-end data and voice communications solutions to established and new carriers, enterprises and consumers worldwide. It is No. 1 in the fixed wireless sector; No. 1 globally in undersea fiber-optic cable systems and voice switching; and a leader in North America in cross connect sales and in the SONET transmission market.

Alcatel showed off its latest leading edge products last month in Atlanta at SuperComm '99, the largest North American trade show for carriers. Attendees saw a splitterless full rate ADSL (asymmetric digital subscriber line) that lets the typical twisted pair line coming into a home carry data as well as voice, without the neces-

sity of a technician making changes to your PC. Also, a next generation digital loop Litespan platform that collects high capacity data and voice traffic and carries it back to the central office exchange.

Alcatel is clearly concentrating on a) the Internet, reinforced by its recent acquisitions in the IT area, and b) inter-optical networks, says Neil Salisbury, Senior Director of Strategic Marketing. "Our optical gateways for mega bandwidth management" and optical add/drop multiplexer for Dense Wave Division Multiplexing (DWM) address those markets.

In 1998, **Siemens Information and Communications Products** (www.siemenscordless.com) developed and brought to the North America market the first multilane cordless system to use the 2.4 gigahertz band of the radio spectrum. The Gigaset 2420 is an inexpensive, but potent system that can handle two outside lines and up to eight extensions, making it an ideal phone system for the small office-home office.

"We're proud that the R&D and manufacturing on this feature-rich device was achieved in tandem between our Richardson and Austin operations," said Stacey Black, VP-Marketing. Siemens came to the Corridor in 1996 and now has more than 500 employees in Texas. "The industry synergy here is incredible, and the Metroplex is a great test-bed for cutting edge wireless products."

The Gigaset 2420's base station offers a 100-name dialing directory, speed dial, call forwarding, call waiting, call transfer, call hold, call park, call park and answer machine capability, and one wireless handset with a 12-name directory, costs \$395.

R&D Tax Incentive

Texas just upped the ante for retaining and attracting high-tech firms — as if having a personal state income tax were not important enough — by amending its tax code to give a credit for all types of research and development expenditures in the state.

Based on federal guidelines, agricultural, biotech, pharmaceutical, telecommunications and other companies will get a 4% to 25% (maximum 5% per year) credit against their state franchise taxes. The formula should produce about \$100 million in credits in the first year.

The formula, which includes investment in new jobs, includes the range to 50% in year two.

"It will also attract the many young companies concentrated in the area that don't have a product on the market yet," observes TI's Phil Ritter, who has served in the legislature.



Fujitsu Network Communications, with 1,800 employees at its 100-acre facility, makes fiber-optic network transmission equipment.

Aggressive Talent Search

The most crucial element in the TelCorridor's efforts to outdistance competitors in San Diego, Chicago, Raleigh-Durham, even Nice, France is people. Not just a labor pool, but intellect.

The key to continued innovation is brainpower, how to attract it, train it, retain it, re-skill it, and retain it. The tight-

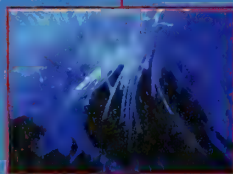
STARTech

multimedia applications are spurring demand for networking technologies that exceed the old circuit switch paradigms for moving voice, data, and images. By streamlining the movement of information, photonics also will reduce the cost.

The University of Texas at Dallas, determined to become the leading knowledge resource for photonics, renamed one of its research centers the Photonics Technology & Engineering Center. UTD, ranked among the top 100 four-year public colleges in the nation (*Kiplinger's Personal Finance Magazine*, September 1998); has helped mount a seminar to introduce entrepreneurs to technologies sought by the indus-

try and is busy recruiting promising graduate student study photonics at UTD.

"De-regulation, the wireless revolution, the Internet. By itself is creating tremendous change," Blanton muses. "The energy and creativity resulting from entrepreneurship is one way big companies can deal with such rapid change. STARTech intends to play a strong role in bringing the two together."



— Preston F. Smith
Six current STARTech entries are discussed in the unabridged version of the story <http://www.adsections.businessweek.com>.

— unemployment in the region is 2%, — increases the difficulty.

recruiters pursuing engineers are known to use local restaurants and watering

The companies referral fees of up to \$1,000 and pay the recruiters signing bonuses. Texas Instruments is sweetening its offer by holding a draw for sports utility vehicles for all employees who make successful referrals. It is little wonder that so many foreign engineers, particularly Asians, have flocked to the Corridor to study and work. Thirty percent of

employees are actually referrals from other employees," says Alcatel's Salisbury, "and his area contributes 20% of our new hires. For any high-tech firm, recruiting is a challenge no matter where you are in the Corridor. We pay anywhere from \$200 to \$1,000 depending on the level of recruit." The hiring headaches are so severe, corporate collaborations are becoming commonplace. Corporate executives gladly sit on multiple advisory boards that help guide the build-up of its curriculum and strategy. They hold joint recruiting trips, the way a Boston job fair in 1998. White-collar delegations routinely travel to other U.S. tech centers, as well as abroad, where the "jobs available" message is conveyed by launching other initiatives.

ies and Teens

Telecom Corridor Technology Training Network, a consortium of the TBC and two community colleges, has received more than \$2.3 million in state grants to provide customized, high-tech job training for 1,900 workers to meet the demand for two-year-degree technicians, TI's reports. Nearly all the 42 area community colleges and universities are tuned to preparing students for technical work. Mayor Slagel, who also is Vice Chair of Global Employer's Network, Inc., says: "The (recruiting) rewards (of money), computers, trips, cars," confirms. "It is very competitive. There is nothing in the range of 350,000 (high-tech jobs available) at any one time around the country." Slagel estimates 3,000 to as

many as 8,000 jobs are open in the Corridor at any one time, including "probably over 400 just for the photonics area."

On a nonprofit basis, GENI has initiated an Internet recruiting tool for the area. The Web site, www.ejobs.com/telecomcorridor, features Metroplex information on housing, education, weather, culture, salary comparisons, and sports. TBC members help underwrite promotion of the site and get direct links to their own Web sites.

Employee candidates can cut and paste their resumes to the firms and have GENI distribute them. In the first 13 months there were about 43,000 visitors, and GENI forwarded 125,000 resumes to the 181 participating companies.

Economic Epilogue

Clearly, there is an endless flow of fresh ideas from those who live and work in the Telecom Corridor®. Local officials and busi-

ness leaders have succeeded in creating an environment that nurtures innovation and supports new companies.

The synergy is authentic. The vaunted "critical mass" genuinely exists. And the modern marvels of telecommunications are made a lot more vital — and little more routine — to our lifestyles every day.

Preston F. Kirk is a former UPI/Houston reporter and a founding editor of Houston Business Journal and Texas Business Magazine. He recently relocated to Austin, Texas after a 23-year residency in the Telecom Corridor. He can be reached at kirk@281.com.

For the unabridged version of this special section, go to <http://ladsections.businessweek.com>

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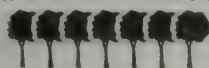
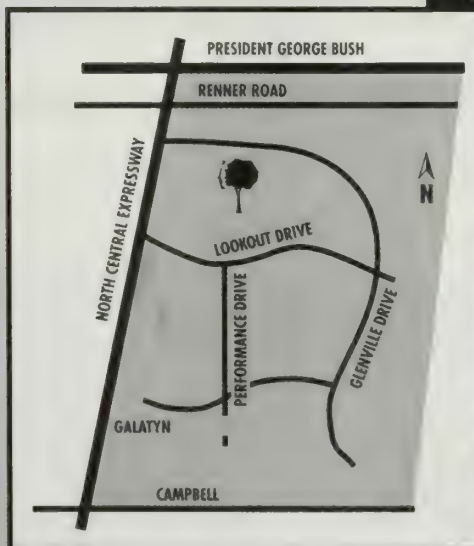
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JAMES C. COOPER & KATHLEEN MADIGAN

GOOD NEWS ABOUT JOBS BAD NEWS TO THE FED

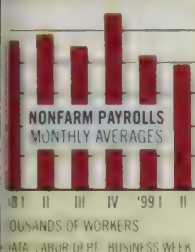
Large gains could start outstripping productivity, reigniting inflation

U.S. ECONOMY

The Federal Reserve cannot come out and say it directly, the main reason policymakers want to restrain economic growth is to loosen up the labor markets. Admit that would be political suicide. But the Fed says that, with markets already so tight, job growth will slow if the economy is to avoid a surge in wages that could trigger a rise in inflation.

That's why the employment report, one of the first signs at monthly economic activity, is back in the spotlight as a bellwether of future Fed actions on interest rates. For the outlook, the June employment report signaled that business activity ended the second quarter on a solid note. Nonfarm payrolls grew by longer-than-expected 268,000. And the average workweek lengthened by six minutes, helped by another gain in factory overtime. That's a sign that manufacturing is rebounding.

3% GROWTH: SLOWER, BUT STILL STRONG



As for price pressures, the June report was a mixed bag. True, wage growth in the second quarter slowed further. And the trend in total hours worked in the economy suggests that productivity growth posted another stellar performance last quarter. But job gains, though shrinking a bit (chart), are still too large to keep the unemployment rate falling further from its already low 4.3%. Moreover, workers seem less worried about being laid off at any time in this eight-year expansion. Less insecurity could lead to more demands for bigger raises.

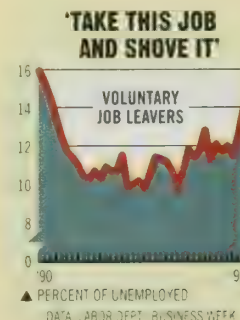
In addition, the Fed saw other hints of price pressures in the data released right before the long Fourth of July weekend. The nation's purchasers said that their price index jumped to the highest level in almost two years and that companies are taking longer to fill orders. Also, auto makers are predicting that 1999 may set a record in sales. That's hardly a sign of over consumer spending, another trend that policymakers would like to see.

COURSE, THE FED recognizes that labor markets are tightened over the past few years without an accompanying pickup in inflation. As the Fed noted in

the June 30 statement announcing its interest-rate hike: "Labor markets have continued to tighten over recent quarters, but strengthening productivity growth has contained inflationary pressures."

Productivity very likely posted another big increase in the second quarter. Total hours worked in the economy edged up at just a 0.7% annual rate in the spring, even as the available spending data indicate that the economy grew at a pace in excess of 3%. Unless foreign producers satisfied the majority of that demand (data on foreign trade are now available only through April), U.S. output per hour worked appears to have grown by 2% or more last quarter. That gain not only explains why inflation remains tame but also suggests that corporate profits performed well last quarter.

The Fed's worry is that the U.S. is near the point where the labor markets become so tight that pay gains begin to outstrip even the recent strong productivity advances. Nonfarm hourly pay rose 3.6% in the year ended in the second quarter, down from 4.3% in the spring of 1998. But as long as businesses face a shrinking pool of available labor, wage acceleration remains a long-term threat to this expansion. Indeed, yearly wage growth in manufacturing, which had slowed to 1.8% at the end of last year, has accelerated to 2.9% as of June. As Fed Chairman Alan Greenspan has said, the laws of supply and demand in the labor markets have not been repealed.



AND SO FAR, JOB GROWTH is not slowing enough to loosen up the labor markets. Thanks to a loss of 5,000 jobs in May, second-quarter employment growth averaged just 195,000 new jobs per month, the smallest quarterly rate in 3½ years. Even the broader tally of employment, the household survey that includes the self-employed and farmers, shows new jobs increasing by about 180,000 per month over the past year. The problem is that the labor force is growing only by about 160,000 per month. Employment gains at the current pace will reduce the jobless rate to below 4% by yearend.

Healthy employment gains appear to be contributing to a change in job attitudes among consumers. A large

45.8% of consumers viewed jobs as "plentiful" in June. And the so-called quit rate, the ratio of the unemployed who voluntarily left their last job, averaged 13.9% last quarter, the highest quarterly percentage in more than nine years (chart, page 37).

Greenspan has pointed to the quit rate as a measure of job security. He believes that job anxiety has been a key reason holding down wage growth in this expansion, as workers who are worried about layoffs are unlikely to seek bigger pay raises. But if workers feel confident that they will have no problem finding a new job, they are more likely to leave their current employer, possibly for another job at higher pay.

FACTORY WORKERS are the one group still holding on to their job jitters. Manufacturing cut 35,000 more jobs in June. Almost half a million factory workers have been laid off since March, 1998.

But the news from the industrial sector is getting better. The National Association of Purchasing Management reported that its business activity index rose from 55.2% in May to 57% in June, the highest reading in two years. The NAPM said that production, orders including exports, and inventories all increased in June. In particular, the NAPM's employment index has jumped in recent months, suggesting that the factory job losses may be ending soon.

In addition, the purchasers' index covering prices

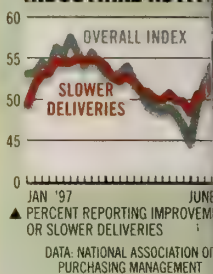
paid for supplies jumped to 53.5%, the highest since October, 1997. They also said that delivery times lengthening (chart). That's a sign market activity beginning to press against the distribution system, usually an early signal that heavy demand is causing production constraints that can lead to price increases.

One hot spot for demand is vehicle sales. Purchases of cars and trucks hit an annual rate of 16.9 million in June. The second-quarter average stood at a 16.7 million pace, up from 16.4 million in the first quarter, marking the strongest quarter since 1986.

To keep the economy from overheating, the Fed would like to curtail demand for autos and a host of other goods and services. When businesses see demand ebbing, they will rethink their hiring plans. Job growth will cool and so will pay demands.

To achieve that end, the Fed faces a delicate operation. It wants job growth to slow, but only enough to keep price pressures from working their way into the system. Once rising inflation takes hold, the Fed knows it would have to tighten policy more severely. Slow job growth may be politically incorrect, but the alternative—a recession—would be a policy disaster.

PURCHASERS SEE MORE INDUSTRIAL ACTIVITY



ITALY

WHY ITALY CAN'T IGNORE PENSION REFORM

When it comes to budgetary matters, Italy has a habit of postponing the inevitable: Once again, pension reform has been put off, but the debate is sure to heat up by the time the budget for fiscal year 2000 is due this fall.

The Document for Economic & Financial Planning (DPEF), Italy's four-year budgetary blueprint, projects 15 trillion lire (\$8.3 billion) in deficit cuts for 2000, which would reduce the budget gap to 1.5% of gross domestic product, as set forth by the European Union (table). Because Italy will miss its 2% target for 1999 with an expected 2.4% deficit, the government must make more budget cuts than those planned to

meet the 1.5% goal. The cuts must include spending reductions equal to at least 0.5% of GDP.

The DPEF, however, provides no specifics on where the cuts will come from, and it makes no commitment to pension reform. Cuts of that size will be difficult to achieve without touching Italy's generous and politically sensitive pension system, and intense wrangling with the unions seems unavoidable as budget season approaches.

The problem is compounded by Italy's need to support its ailing economy, the euro zone's weakest. This year's budget setback arose because 1999 growth is expected to be 1.3%, based on the DPEF,

half of the government's earlier 2.7% projection. The DPEF expects growth to pick up to 2.2% in 2000.

That forecast seems achievable. The chief drag has been a weak foreign sector, but now world growth is set to pick up, if only gradually. Also, first-quarter GDP was stronger than expected, rising 0.2% from the fourth quarter and 0.9% from the year before.

Solid first-quarter gains in consumer spending, construction, and business investment show that domestic demand is picking up in response to 1998 cuts in interest rates. First-quarter weakness was confined to foreign demand and a drawdown of inventories. Still, the new budget projections are tight, with little room for error on both growth and interest rates. Some give on the pension impasse will be needed.

ITALY'S BUDGET BLUEPRINT

	1999	2000
GDP GROWTH	1.3%	2.2%
BUDGET DEFICIT*	2.4	1.5
INTEREST OUTLAYS*	7.1	6.5
PRIMARY SURPLUS*	4.6	5.0
TOTAL DEBT*	115.7	112.9

DATA: DOCUMENT FOR ECONOMIC AND FINANCIAL PLANNING *PERCENT OF GDP

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DISNEY: OUT ON A LIMB

Its traditional
strengths
aren't enough
anymore



It worked just as Walt Disney himself might have planned. Even before hitting the theaters, *Tarzan* was on its way to becoming a hit. The soundtrack was climbing the charts, while kids at Disneyland were climbing Tarzan's Treehouse. And in just 15 days, the Ape Man swung through the \$100-million mark at the box office, all but assuring that Disney's 37th animated feature will be the best thing since *The Lion King*.

After a string of so-so performers, including *The Hunchback of Notre Dame* and *Hercules*, the Disney magic appears to be intact. But not on Wall Street. Just before the July 4 holiday, three analysts cut their estimates of the company's earnings for this year and next. And by July 7, Disney's stock was trading at \$28.06, 8% below its price when *Tarzan* opened on June 18 and 5% below where it began 1999. Shares of Time Warner and News Corp., mean-

while, have soared by as much as 40%. Only six of the 21 analysts who follow Disney rate it an unqualified buy. A year ago, 17 of 18 did.

The irony is that Disney is getting booed on Wall Street—where CEO Michael D. Eisner once commanded a cult-like following—even as many of its businesses are looking healthier than they did two years back. The ABC network, despite having lost 2% of its audience

theme-park operator into a major conglomerate has worked. In the days, a hot movie could always do trick. If earnings sagged, Disney could reissue some classic videocassette, raise ticket prices at Disney World. Those moves don't do enough to lift the bottom line for a \$23 billion empire. "Disney no longer looks different than any other dio out there," says Alan S. Gold, follows Disney for Gerard Klauer Ma-

The problem: How to hold an audience and

during the last season, lost fewer viewers than either CBS or NBC. And it sold \$1.9 billion in "up-front" ads for the coming season, a 46% hike over last season. Disney's ESPN unit is still a big moneymaker and its film studio is recovering from a rocky 1998 with a string of small hits.

The problem for Disney is that Eisner's 15-year effort to build up the company from a \$1.6 billion film studio and

son & Co. "I used to say that Disney was the only company that could legitimately generate earnings any time it needed it. Now, they seem to be having trouble keeping up with everyone else."

Like other media companies, Disney is trying to figure out how to hold audiences and develop brands in a marketplace where consumers can choose from hundreds of TV channels or log on to

DISNEY IN TRANSITION...

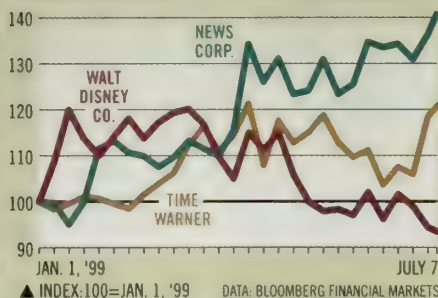
FILMED ENTERTAINMENT Studio chief Joe Roth has slashed costs, number of films produced. But even solid hits such as *Tarzan* aren't likely to raise the bottom line.

BROADCASTING ESPN is going strong. ABC, despite market-share losses, has some hit shows and is getting good ad revenue.

THEME PARKS & CRUISES Competition is heating up. Disney is responding with new thrill rides in Orlando and a second park in Anaheim. A cruise ship opened behind schedule.

THE INTERNET Disney now controls Infoseek, which is trying to build a major portal around Go Network, which includes links to ESPN and Disney content. Internet Chief Jake Winebaum quit to join a startup—following others.

...AND BEHIND MEDIA RIVALS



A HIT,
TARZAN
STILL MAY
TRAIL
HUNCHBACK
IN PROFITS

net. The Disney philosophy remains essentially unchanged: Come up with the TV shows, movies, or whatever, and eyeballs will follow.

But even Disney's powerful brands storytelling talents don't guarantee success now. Take *Tarzan*. The movie wound up taking in \$185 million in U.S., making it Disney's third biggest-selling animated film. But it's unlikely to do as well as *Hunchback*, which bare-

ly then merchandising them every which way is no longer so reliable. Disney, which generated an estimated 14% of revenue from merchandising and Disney Store sales last year, isn't the only victim. Companies that paid steeply to license *Star Wars* toys are finding sales are disappointing (page 42). Even before *Tarzan* was released, Disney financial folks had been telling Wall Street that merchandising might be weak. Same-store sales

marketing operations of its home video and movie units, reorganized its international divisions, and overhauled its product licensing business. It even got its 220 ABC affiliates to cough up \$50 million a year to defray the cost of the \$550-million-a-year tab for the right to broadcast National Football League games.

CHOPPING. That's nothing compared with the wholesale pruning going on at Disney's studio. There, the budgets for making and marketing movies have been chopped by \$600 million from last year's \$1.7 billion. Disney is also enlisting partners for some of its more expensive films such as *Instinct*, the Anthony Hopkins vehicle that bombed, and *Bicentennial Man*, with Robin Williams.

Studio chief Joe Roth says he's scaling back production to 16 to 20 films a year, from 28 annually three years ago. And, he says, Disney won't take big risks on would-be blockbusters with massive budgets. "We're still going to make films with stars and a lot of action," he says, "but if we're going to spend a lot of money on it, then the film had better be awfully special."

Cost-cutting is the easy part—and one of Eisner's proven talents. But that alone won't convince Wall Street that Disney can again deliver the 20% average annual earnings gains of old. ABC still trails NBC and CBS in viewers, and earnings from the 12 ABC affiliates that it owns have fallen because of a softer local ad market. What's more, ESPN, which earned more than \$600 million last year, faces immense competition from Fox Sports Channel. To fend off a rejuvenated Universal Studios, which has spruced up its Hollywood theme park and spent \$2.5 billion on Islands of Adventure in Orlando, Disney will spend more than \$2 billion to build a park near Disneyland in Anaheim, Calif., and add rides in Orlando.

All that spending will likely pay off one day. But it will drag down Disney's earnings for a year, maybe two, most analysts feel. Disney is also contemplating a major write-down for later this year,

Consume competition from the tube and the Net

cost \$100 million, in video and merchandising sales, says Salomon Smith Barney analyst Jill S. Krutick. She's pegging \$185 million in video earnings and \$160 million in merchandise profits from *Tarzan*, vs. \$200 million in video sales and \$160 million in merchandise earnings from *Hunchback*.

Overnight, it seems, the old formula of creating endearing characters on film and

at Disney Stores are likely to be down 10% this year, say analysts. Even sales of Winnie the Pooh merchandise, last year's hot toy, will be flat at best.

The problem for Disney is that there is no quick fix. Confronted with a 14% drop in operating earnings in the first quarter, Eisner put his company on a top-to-bottom crash diet to slash costs. Since then, Disney has merged the mar-

most likely one that will include losses from its NFL contract and box-office bombs.

On the positive side—at least if Eisner's enthusiasm counts for anything—is Disney's Internet potential. Within weeks, the company is expected to buy the remaining 57% stake in Infoseek Corp. that it doesn't already own and will bundle that into a new unit. Go

Network, the Disney-Infoseek portal, has gained market share, and Disney is adding Web content monthly—despite the loss of high profile Net exec Jake Winebaum in June. The Web properties are expected to show losses of \$50 million or more. But Disney is contemplating issuing a tracking stock for its Net assets that could soar along with other Net shares.

One headache and major management distraction has been eliminated: On July 7, Disney announced a settlement with Jeffrey Katzenberg, the former studio chief who was seeking more than \$250 million in money he claimed he was due. Neither side will comment, but sources close to the negotiations say Katzenberg will get at least \$200 million. Disney insiders say the agree-

ment was negotiated by Stanley Gold, Vice-Chairman Roy Disney's longtime financial adviser and a Disney director who recruited Eisner along with the late Frank Wells, to run Disney in 1984. And like many of its shareholders, Gold would desperately want to see the company return to its high-flying days.

By Ron Grover in Los Angeles

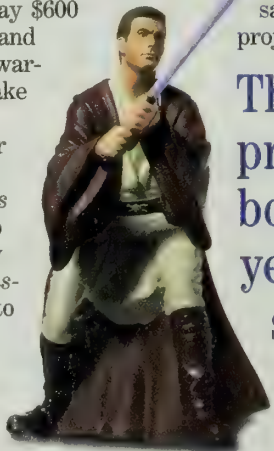
THIS PHANTOM IS A MENACE TO TOYMAKERS

At the front of KB Toys in Santa Monica, Calif., stands a 16-foot display of goodies based on *Star Wars: Episode I—The Phantom Menace*. But kids rush by on their way to Pokemon and World Wrestling Federation merchandise. "I am not that interested," says Jason Jackson, 10. "I already have some *Star Wars* stuff."

The scene reveals a disturbance in the Force. *The Phantom Menace*, the much-hyped *Star Wars* prequel, has rung up \$370 million at the box office, which puts it on course to become one of the top-grossing films of all time. But the merchandising wave that companies paid dearly to catch is not swelling to the record-smashing heights that they expected. From stacks of unsold Micromachines at KB to piles of *Star Wars* T-shirts that are 30% off at Macy's, there are signs of distress in the Empire. Even Howard Roffman, head of licensing at Lucasfilm, concedes that some *Episode I* merchandise isn't flying off shelves as expected.

When George Lucas started the new *Star Wars* series, companies such as Hasbro and PepsiCo Inc. paid huge sums for licensing rights. Hasbro committed to pay \$600 million in royalties and granted Lucasfilm warrants for a 7.5% stake in the toymaker as part of its nine-year licensing deal. "For licensees, *Star Wars* doesn't just have to be big," says Marty Brochstein of *Licensing Letter*. "It has to be huge."

**STAR WARS
ACTION FIGURE
AND PEPSICO'S
DRINKING STRAW**



So far, it only looks large-headed for about \$1 billion by yearend. Wall Street analysts now expect Hasbro's *Star Wars* sales to reach \$500-\$600 million this year, as much as \$200 million less than earlier estimates. Taco Bell, Pizza Hut, and KFC, all owned by Tricon Global Restaurants Inc., a PepsiCo spin-off, have not generated additional traffic with *Star Wars* freebies, says analyst Damon Brundage of J.P. Morgan & Co. Analysts figure that PepsiCo's *Star Wars* collector cans helped it grab share from Coca-Cola Co. this spring. But PepsiCo has committed to providing \$2 billion worth of *Star Wars* promotions (including via Tricon) from 1997 through 2001. "They may not lose money," says Brundage, who follows Tricon. "But you have to ask whether that was money well spent."

The companies that bet big on *Star Wars* merchandising say they're not disappointed. Hasbro says sales are in line with expectations. And LEGO says *Star Wars* sales are 15% ahead of projections. Overall, how-

The *Star Wars* prequel has done boffo box office, yet merchandise sales have been disappointing

ever, *Star Wars* toys won't deliver the huge payoff that was expected. Adult collectors are snapping up the action figures, but kids seem lukewarm. "The only way for it to be a real long-term success is to get the kids," says Thomas Alfonsi, head of merchandising for KB. Without the kid groundswell, chains that counted on *Phantom Menace* mania to carry through Christmas aren't optimistic. "Wrestling merchandise may be as big by then," says one toy-store exec.

If *Star Wars* tie-ins fall short, the rules for Hollywood merchandising could go to rewrite. In the past decade, movie makers have been able to wring ever-higher royalty rates from licensees of toys, clothing, and other goods. But the payoff has been shrinking. Mattel Inc. felt the pinch when several recent Disney pics, including *Hercules*, passed \$100 million at the box office but did little in toy sales. *Godzilla* was not the bonanza toymaker Trendmasters Inc. had hoped for, either.

While big toymakers are sticking with movie merchandising for now, others are bailing out. Equity Marketing Inc., a midsize toy-and-promotions company that was burned by *Babe: Pig in the City* and *Godzilla*, has sworn off tie-ins. Now, if even smash hits don't ring up big merchandising profits, studios may have to plug a smaller number into their budgets for licensing fees.

By Kathleen Morris in Los Angeles

By Aaron Bernstein

ALL'S NOT FAIR IN LABOR WARS

This week's puzzler: How is it that more and more workers are saying they want to join unions, while at the same time the percentage of unionized employees in the workforce continues to decline?

In the midst of the best real wage gains and job opportunities in years, 50% of employees surveyed nationally this spring say that they would vote for a union at their workplace, according to Washington-based pollsters Peter D. Hart Research Associates. That's up from 39% in the mid-1990s and 30% in 1984. The reasons

vary. Some workers believe that while executives and managers have been richly rewarded, they themselves have not received a large enough share of the wealth generated over the past decade. Others could want a union to fight for better health and pension benefits.

VAR. But whatever the motivations may be, some 40 million workers say they want a union today, compared with only 19 million in 1984. Management argues that whatever these workers tell pollsters, they end up changing their minds when an actual union vote occurs. But in so many people

change their minds so consistently? Certainly, labor leaders are partly to blame for the disconnect between pro-union sentiment and dwindling membership. For decades, they have focused on preserving jobs rather than organizing the fastest-growing parts of the economy, such as services and high tech. So, many workers who say they favor a union may never have been offered the opportunity to join one. Only recently, prodded by AFL-CIO President John J. Sweeney, have unions shifted back to organizing.

Still, this doesn't explain why unions only win half the elections held at private companies, but are voted in 55% of the time by public-sector em-

ployees. What is the probable cause? The increasing use of anti-union tactics by private employers. According to analyses of data from the National Labor Relations Board (NLRB) by labor researcher Kate Bronfenbrenner of Cornell University, companies are increasingly using every weapon—legal or not—to thwart attempts to organize their workers.

A third of the companies in the NLRB study illegally fired union supporters during elections, Bronfenbrenner found. That

FRESH BLOOD: new UNITE union workers rallying at a Miami Beach convention



ENIGMA What's behind labor's poor showing lately? The likely answer is greater use of anti-union tactics

was up from a mere 8% in the 1960s. Half threatened to close facilities if the union won, and 91% required workers to meet one-on-one with supervisors on the issue. Sweeney calls these tactics a "secret war in our workplaces."

To see how influential management can be, just look at the quarter-century effort to organize textile employees at Fieldcrest Cannon Inc. plants in Kannapolis, N.C. On June 24, a slim majority of 5,200 workers voted in the Union of Needletrades, Industrial & Textile Employees (UNITE) after five previous votes failed. In the prior elections, the NLRB intervened because Fieldcrest Cannon had harassed and fired pro-union workers.

The difference this time: a change of management. In 1997, Dallas-based Pillowtex Corp. bought the company. Its CEO, Charles M. Hansen Jr., is no fan of unions—he even sent a video of himself to workers arguing against the union. But Hansen also ordered his supervisors not to break any labor laws. "I made sure managers didn't make any threats, even implied ones," he notes. Says UNITE Secretary-Treasurer Bruce S.

Raynor: Hansen simply "accepted the fact that workers have a right to vote for a union."

Such a laissez-faire attitude is unusual. Managements, according to National Association of Manufacturers Vice-President Patrick J. Cleary, are merely "exercising their First Amendment rights to give [workers] facts about unions" when they campaign against unions. But the reality is, there is a disturbing trend of management coercion that inhibits workers.

Failing to restrain anti-union campaigns has also allowed management to limit labor's overall power. If even half of the employees who say they

favor union representation had been allowed to vote for unions, organized labor would represent as much as 35% of the American workforce today—the same share it held at the peak of its power in 1945. Instead, owing in part to a relatively toothless NLRB since the Reagan Administration, labor's ranks have plunged to 14%.

The U.S. wouldn't tolerate companies that intimidated employees who supported a politician management disliked. The standard of fairness should be no less democratic for workplace elections.

Bernstein covers workplace issues from Washington.

THE ECONOMY

YOU CAN GO HOME AGAIN —WITH A RAISE

Businesses are going to unusual lengths to fill jobs

Three years ago, Jeff Cunningham, a 36-year-old technology consultant, left Iowa for Denver and a job that tripled his salary. But the Iowa State University graduate was beginning to tire of the Mile-High City when he received a pitch letter from the Iowa State president about what he was missing in Iowa. Cunningham and his family headed back to Ames, where they were greeted by neighbors bearing lemonade and cookies. Now, working at computer consultancy Cap Gemini America, Cunningham says he couldn't be happier. "This is a much better environment for kids, and there are a lot more jobs at higher salaries than a few years ago," he says.

Iowa's first-term Governor Tom Vilsack has only one question for Cunningham: Would he like to be cloned? Vilsack has been barnstorming the U.S. recently, looking for other twenty- and thirtysomethings who might have a soft spot for the rolling dunes of Iowa. He has been speaking at high schools and colleges, and recently, he offered Iowa beef and Maytag blue cheese at Manhattan's Tavern on the Green to emigrés. Marianthi Markatou, a 39-year-old statistician at Columbia University who once taught at the University of Iowa, accepted the invitation to sup with 850 other former Iowans in Central Park, but not the invitation to go back to the Midwest. "Iowa has a nice, interesting envi-

ronment," she says. "But more opportunities come your way in New York or California." Vilsack remains undeterred: He simply can't afford not to be. **FREE BARBECUE.** After two years of national unemployment below 5% and nine months below 4.5%, states and companies are in a mad, competitive dash to fill ever more jobs in an economy that won't slow down. States are reporting once-unthinkable unemployment rates—not only below 4%, but below 3%. Low population growth in the Midwest and New England and outmigration from the Great Lakes states have produced acute labor shortages. If the crunch spreads: "It will be a binding constraint on the economy's ability to grow further," says Mark M. Zandi, chief economist at Regional Financial Associates Inc. in West Chester, Pa.

This makes life difficult for officials like Robert Miller, Vermont's commissioner for the Economic Development Dept. He'd like to recruit some new employers to help the state's tax base, but it "would only exacerbate our labor market problem." If anything, Miller worries about defections as enterprises relocate to be near skilled workers.

Like Vilsack, other governors and

BACK TO THEIR

ROOTS: The Cunninghams were recruited back to Iowa from Denver.

employers from the tightest markets are fighting back with incentives at enticing workers to move into areas. For instance, Orlando-based press Cos., operators of hotels and restaurants in the Southeast, is trying to entice candidates by promising they will match or exceed current pay levels and extend such benefits as 401(k) plans to relatively new, low-paid hires. On July 17, Denver's Regional Transportation District, in a desperate search for bus drivers and mechanics, will throw a free barbecue and pay \$5,000 to qualified applicants who show up. "We've got to be smarter; get up early and have a good benefits package, and more for our employees to keep the



STATE UNEMPLOYMENT RATES

The areas of the U.S. that have the lowest unemployment rates are the so-called West North Central at just 2.0%, New England at 3.3%, and the South Atlantic at 3.8%



DATA: BUREAU OF LABOR STATISTICS

ys Jasmine Richards, Cypress' vice-president of human resources. "Otherwise, I'm going to have to start building robots."

TECH TRAINING. There are also incentives for employee referrals: At Cambridge software upstart CoMan Corp., with just 27 employees but a late unemployment rate of 3.8%, the going price for a new worker is \$2,500. Medical device maker Medtronic Inc., facing competition from other companies in its Minneapolis home, will pay up to \$5,000 for hot job prospects in software development and extended a menu of benefits to employees working just 32 hours a week. Companies unable to tap traditional sources of labor are venturing further out of the mainstream. The last four engineers hired by Spring Engineering & Manufacturing Corp., an auto parts supplier in Livonia, Mich., were recent emigrants from Eastern Europe who could not speak English. Northern Ohio's Lorain Point couldn't fill its summer jobs with U.S. college students, so it turned to Europe. And corporations are also using unusual techniques to reach workers. On July 5, Chicago area residents were taken to a *Chicago Tribune* encased in a white, and blue wrapper proclaiming, "Prola has great jobs in Chicagoland." Most of these are short-term fixes. In the longer-term, a number of private-sector employers and state governments are stepping up their efforts at structural changes. In Iowa and Utah, officials are working with private employers, high schools, and colleges to match future job needs and curriculum design. Iowa recently approved \$2 million to support a research center in plant sciences at Iowa State, while Virginia, hoping to attract semiconductor manufacturing, is spending millions to strengthen high-tech education. Missouri and Pennsylvania have approved forgivable loans of several thousand dollars to students taking courses in growth areas like biotech who agree to stay in-state for work. Some companies already seem to be leading headway. Pella Corp., a \$700 million maker of windows and doors in tiny Pella, Iowa, has picked up a dozen new employees off the state's new job Web. Of course, Iowa, and many other states, are not for everyone. But, what a change from the days when scores of companies were being furiously courted by states looking for new employers. Now, the battle is for people.

by Richard A. Melcher in Chicago, Laura Cohn in Washington, D.C., William C. Symonds in Boston, and but reports

COMMENTARY

By Paul Magnusson

BRING ANTIDUMPING LAWS UP TO DATE

Bought any Japanese-made mechanical bicycle speedometers lately? Probably not. They grew scarce in '72 after the Commerce Dept. slapped an antidumping tariff on them in an effort to protect U.S. makers. Cyclists long ago switched to electronic speedometers, but the duty on analog Japanese gauges remains on the books.

Same goes for products ranging from Turkish aspirin to

Venezuela, Mexico, Iraq, and Saudi Arabia are dumping crude even though three of those four are members of the Organization of Petroleum Exporting Countries, which seeks to limit oil production in order to raise prices.

FLEXIBILITY. Worst of all, '30s-era dumping laws often don't aid U.S. companies that deserve help. Entire industries can collapse—as did the U.S.-based color-TV biz—as anti-

dumping cases crawl through the Commerce Dept. and the U.S. International Trade Commission. The problem is, obsolete U.S. dumping laws never anticipated huge multinational price-fixing cartels in such strategic and capital-intensive industries as steel and semiconductors or the creation of vertically integrated Japanese *keiretsu*. Similarly, dumping laws don't take into account absurdly lax antitrust enforcement abroad.

The solution: In cases where foreign price-fixing cartels are supported by protected markets and mercantilistic policies, the barrier for proving dumping ought to be lowered, and retaliation ought to be swift. The process of bringing antidumping cases should be more flexible, too—for example, letting the President waive dumping penalties in the national interest. Also, industries that are granted relief ought to prove that they have a sound plan to restore their competitiveness while the dumping duties are in place.

Some economists would prefer to do away with antidumping laws entirely, arguing that if foreigners want to give away their goods, what's the harm? But Britain tried that in the late 19th century and found its essential industries starved for investment—and eventually hollowed out. Washington needs to rethink its dumping laws for today's economy.

Magnusson covers international trade and economics from Washington.



Ukrainian uranium. Washington will soon review 314 dated dumping penalties to see if they should stay. But unfortunately, there are no plans to reexamine America's 1930s-era laws on dumping. It's time for a revision.

Antiquated trade laws encourage the filing of specious dumping cases by using pricing formulas that make it far too easy to win big penalties against imports. U.S. dumping laws also fail to take into account such developments as floating currency-exchange rates, which make dumping—that is, exporting at prices below the home-market sales price—appear to be more widespread.

The latest antidumping complaint, brought on June 30 by small U.S. independent oil producers, demonstrates the illogic of some antidumping cases. The group claims that

COMMENTARY

By John Carey

PAYING FOR PILLS WON'T PAY FOR ITSELF

Prescription drugs can help stave off heart attacks, prevent hip fractures, and cut the risk of stroke. That's one reason the share of the U.S. health-care bill devoted to pharmaceuticals is now more than 7% and rising. And since seniors represent a major chunk of drug use, adding such coverage to Medicare, as President Clinton has proposed, will ripple through the health-care industry—and the economy. Some experts even hope the plan will help to curb costs by avoiding costlier therapies.

In the short term, the impact on drugmakers would be mixed, analysts say. Pharmaceutical companies would see modest increases in demand. But the plan would also bring discounts negotiated by managed-care insurers. Clinton Administration bean counters peg the average discounts at 10% to 15%; others put it as high as 35%.

Insurers would also have short-term gains and losses. Many seniors now buy Medigap plans for prescription drug coverage. Under the Clinton plan, the government would pick up half the tab (up to \$2,500 in payments) in exchange for an annual \$24 premium. That's cheaper than most Medigap policies, meaning that many Medigap plans would dry up, analysts say. On the other hand, rising drug prices are a major reason why managed-care plans are dropping Medicare patients. With Uncle Sam sharing the cost of drugs, "I think HMOs will be back in the Medicare market," says industry analyst Hemant K. Shah of HKS & Co.

But would a Medicare drug benefit cut health-care costs over the long haul? That would be a boon to insurers, who would have to pay for fewer hospitalizations,



CHOICES: Medicines can stave off surgery

operations, and other procedures.

For specific diseases, there's growing evidence that drugs can indeed save a bundle (table). One study shows that anemia fighter erythropoietin saves about \$2,000 per patient per year by reducing costs of treating anemia associated with dialysis. Blood pressure-lowering beta-blockers also cut costs. "We can prove to you that proper [drug]

treatment for asthmatics will significantly reduce the overall cost of treatment," says Richard J. Kogut, chairman and CEO of Schering-Plough Corp.

SAFER. Moreover, a federal subsidy might bring treatment to Americans who don't get the drugs that could help them avoid illness and injury. Take osteoporosis, which can turn a minor fall into a major injury. "Twenty million women in the U.S. have that disease, yet only about 3 million women are being treated," says Merck & Co. CEO Raymond V. Gilmartin.

But dispensing more drugs won't necessarily cut overall costs. Some drugs taken by largely healthy people for long periods of time, like the cholesterol reducer simvastatin, have raised the overall bill in a clinical study. "It is impossible to generalize across all diseases and say that drug therapy

is cost-effective," says Raulo S. Frear, vice-president for clinical services at Express Scripts Inc., a pharmacy benefit manager in St. Louis.

And in some respects, greater drug use could fuel health-care inflation. Incorrect use of prescription drugs is a problem that costs as much as \$150 billion per year in additional treatment. Then there is the rising price of new drugs, notes Alan

L. Hillman, director of the Center for Health Policy at the Wharton School. Those who argue that drugs will cut costs "miss the point that medications are becoming just as expensive as highly invasive procedures," he says. There are many moral, social, and public health reasons to consider Clinton's Medicare drug plan. Just don't expect it to cut health-care costs.

Saving Lives and Money

How some drugs can bring dramatic costs savings:

DRUG	USE	COST	SAVINGS
TPA	Breaks up stroke-causing clots	\$1,700 per patient	\$4,400 per patient due to less hospitalization and rehabilitation
BLOOD-THINNING	Prevents clots	\$1,025/year per patient	Could prevent 400,000 strokes per year. Savings: \$600 million
BETA BLOCKERS	Prevents heart attacks	As low as \$50/year per patient	Up to \$3 billion by preventing second heart attacks and up to \$237 million per year in treatment of angina
HORMONE REPLACEMENT	Prevents osteoporosis	\$200/year per patient	Can prevent hip fractures costing more than \$40,000

DATA: PHRMA; BUSINESS WEEK

With Amy Barrett
in Philadelphia

E HIGH-TECH LOBBY: EVERYTHING'S GOING ITS WAY

icon Valley writes fat checks, the pols pay heed

High-tech executives had lots to celebrate on July 4. Just days before reworks lit up the skies, the White and Hill Republicans agreed on legislation limiting corporate liability for 2000 software glitches. A day later, President Clinton granted another long wish, announcing his support for curbs on computer exports to China and other politically sensitive nations. "A great week," says Intel Corp. executive Michael C. Maibach, savoring a double-barreled victory. Usually, "great year" may be more appropriate. With the New Economy sizzling with techies opening their checkbooks like never before to political causes, Silicon Valley lobbyists are lining up major victories. And why not? As Techland might argue, who's responsible for this economic boom, any? "This strong technology sector has led the renewal of industries across America," Microsoft Corp. CEO William H. Gates III recently noted in testimony before Congress.

Technology leaders don't yet set the business agenda in Washington, but they are certainly raising their profile. For the 2000 races, computer-industry executives and their companies may close to \$18 million to candidates' parties, double their donations for 1998 congressional elections, according to analyst Holly Bailey at the nonpartisan Center for Responsive Politics. That's peanuts compared with the \$52 million that securities firms poured into political coffers in '98. But techies are relative newcomers to the political game, and both political parties are being in the passenger seat with Silicon Valley," says Bailey.

DREAMS. The big winners so far are the Presidential front-runners: Vice President Al Gore and Texas Governor George W. Bush. Of the \$1.7 million Bush collected on a recent swing through Northern California, for instance, \$850,000 came from Silicon Valley. Gore counts among his major donors: Novell Inc. CEO Eric Schmidt and Netscape Communications Corp. CEO Marc Andreessen.

With the money flowing, high-tech lobbyists are spinning Geek Dreams about how they might be repaid. One priority is making permanent the credit for high-tech research and

development, which is now renewed annually and costs the Treasury more than \$1 billion a year. Support is building in Congress for a five-year extension. What's more, there's bipartisan backing for legislation to speed the growth of E-commerce by setting a national standard for authenticating the electronic equivalent of written signatures.



GORE VISITS AN IBM PLANT

R&D TAX BREAK High tech wants a permanent extension of the tax credit for research and development

ENCRYPTION The high-tech industry will butt heads again with law-enforcement and national-security agencies over its desire to relax export controls on technology used to keep computerized information secret

IMMIGRATION Tech companies will push to raise yet again the ceiling on visas for skilled foreign workers

Techies face a tougher fight to ease export curbs on data encryption—the technology used to keep computerized information secret. Software executives insist that this software is becoming more widely produced: 805 foreign encryption products are on the market today, up from 264 in 1993, according to a survey by the Cyberspace Policy Institute at George Washington University. So, executives argue, the U.S. curbs aren't stopping cyber-criminals and terrorists from laying their hands on software capable of cloaking information with an un-

breakable code. All that the restrictions do, opponents say, is allow foreign competitors to make inroads into a lucrative, U.S.-dominated software niche.

The FBI and the National Security Agency (NSA) want the Administration to defend tight controls. And, until now, the White House has held the line. But it may be forced to compromise if the House and Senate succeed in passing legislation.

In fact, the effort to lift the encryption export ban is gaining support in Congress. In the House, 260 members are co-sponsoring a bill, introduced by Representative Bob Goodlatte (R-Va.), that would relax restrictions. In the Senate, two influential members who once opposed lifting controls—John Mc-

TECHNOLOGY IS ON A ROLL...

Y2K LAWSUITS Compromise legislation was agreed upon that limits corporate liability for Year 2000 computer glitches

EXPORT CONTROLS President Clinton lifts curbs on U.S. exports of computers to China and other politically sensitive nations

DIGITAL SIGNATURES A key Senate panel endorsed a national standard for authenticating the electronic equivalent of written signatures. Passage by the House and the Senate seems likely

... BUT THERE'S A LOT MORE LOBBYING TO DO



BUSH WITH CISCO CEO CHAMBERS

DATA BUSINESS WEEK

Cain (R-Ariz.) and Bob Kerrey (D-Neb.)—are backing compromises more favorable to the industry. "Legislation on this issue is thinkable for the first time in 10 years," says Stewart A. Baker, a former NSA general counsel who now represents high-tech clients. But whether the encryption battle is won or lost this year, the investment that Silicon Valley is making in Washington is likely to produce tech-friendly policy for years to come.

By Amy Borrus, with John Carey, in Washington



RIVAL MODELS GET BETTER RATINGS

DETROIT

IS THE KING OF THE ROAD MOVING OUT OF THE FAST LANE?

DaimlerChrysler's share of the minivan market is shrinking

Is the king of minivans losing its lead? DaimlerChrysler insists it still is firmly in command of the lucrative U.S. minivan market, despite a flood of new competition from Honda, Toyota, and Ford. But the latest sales figures suggest a surprising vulnerability for the company that made the minivan the staple of suburban life. In June, sales of Chrysler, Dodge, and Plymouth brand minivans fell 19% from a year ago, leaving DaimlerChrysler with just 35% of the market vs. 42% in 1998 and 48% in 1992. For the first six months, sales are off 2%, leaving Chrysler's year-to-date share at 40%.

What makes Chrysler's decline particularly alarming now is that minivan sales are rising for the first time in several years. Analysts figure sales could reach 1.3 million units, beating 1994's record of 1.27 million.

Unfortunately for DaimlerChrysler, what's propelling that growth is demand for rival models, such as the Honda Odyssey, Toyota Sienna, and an improved Ford Windstar. These offer better safety ratings and nifty features, such as powered sliding doors and fold-away rear seats, that DaimlerChrysler's four-year-old models don't have. Toyota Motor Corp. and Honda Motor Co., which together held just

3.2% of the market in 1997, are expected to grab about 12% this year, according to Lincoln Merrihew, an automotive analyst at Standard & Poor's DRI.

Who's buying the imports? In Wilmington, Del., Honda dealer Frank Ursomarso says it's often onetime Honda owners who might have opted for a Dodge Caravan in the past because Honda didn't have a minivan. Now, they can stick with their preferred brand, says Ursomarso, president of Union Park Automotive Group, which is sold out of Odysseys through October.

"NOT ALARMED." But the import buyers aren't the only customers that Chrysler is losing in the minivan market. Ford is also making inroads with its improved Windstar, which boasts a top safety rating and high-tech features such as sen-

sors to prevent the van from backing into something or someone. Before '99s came out, the Windstar was a van lacking a critical fourth door. Ford—with first-half sales up 15%—more than one-fifth of the market.

So is the German-American giant alarmed? "We're not alarmed," says S. Jeffares, manager of business strategy for minivan operations. He attributes much of what the company calls a blip to the timing of incentive deals. In January, DaimlerChrysler announced \$1,000 rebates on its minivan models. This propelled Dodge Caravan sales to a record 82,000 in the first three months. Sales have slowed since then, however, even though the rebate doesn't end until Aug. 2. David Bostwick, the company's director of market research, predicts it will all even out by year's end. "We're looking at a very steady decline," he says. But at last year's level of about 523,000—still double its nearest rivals—Chrysler's share would be off.

Even so, DaimlerChrysler is predicting strong results for 1999. And the strong U.S. economy and expected record demand should keep prices fairly healthy, says Scott Merlis, auto analyst at Wasserstein Perella Securities. "The market's still hot enough that we don't have to go wild in counting."

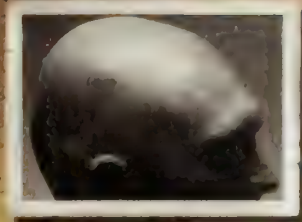
The longtime leader has a chance to pull ahead again a year or so. "Chrysler knows this market better than anyone else," says Merlis. "So the odds favor that when the new models come out, they'll be back on top." Until then, however, the auto maker should keep an eye on the rearview mirror.

By Joann Muller in Detroit

U.S. MINIVAN MARKET SHARE

CORPORATION	1995	1996	1997	1998	1999*
DAIMLERCHRYSLER	39.7	44.4	42.1	42.8	39.4
FORD	32.0	29.9	26.1	19.8	21.0
GM	20.1	18.8	24.5	26.3	24.1
HONDA	2.1	2.2	1.7	1.7	5.1
NISSAN	4.3	3.8	3.8	2.5	3.3
TOYOTA	1.5	0.7	1.5	6.7	6.8

DATA: STANDARD & POOR'S DRI
*ESTIMATES



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COMMENTARY

By David Rocks

THIS IS HOW TO GO WIRELESS, BERNIE

To Bernard J. Ebbers, Chairman, MCI WorldCom Inc.

Re: Your Wireless Strategy

Bernie: We all know there's a hole in your plan to build MCI WorldCom into one of the top phone companies in the world. When it comes to wireless, you're falling behind. You sat out the bidding for AirTouch Communications Inc. You passed on Nextel Communications. Meanwhile, AT&T and Sprint are building nationwide mobile networks.

So here's some unsolicited advice: think GSM. That stands for Global System for Mobile communications—the digital cell-phone standard that more than 5 million people around the world are signing up for each month. It's just gathering steam in the U.S., and you can still get in early. Even better, part of the work of assembling a national network has already been done. In June, VoiceStream Wireless Corp. said it will merge with Omnipoint Corp., creating the nucleus for a nationwide GSM network in the U.S. The combined companies stretch from Seattle to Miami, including the New York metro area.

GOING FAST. But if you don't act quickly, you could be left on hold permanently. European GSM operators are looking for a foothold in North America. Your colleague Edward E. Whitacre Jr., CEO of SBC Communications Inc., might also be interested (he already runs the GSM network in California). And don't count out VoiceStream. Its CEO, John Stanton, helped Craig McCaw assemble his cellular empire, now owned by AT&T.

Sure, I'm biased. During nearly a decade of living in Europe, I got used to a phone number that worked from Madrid to Moscow, not to mention Singapore and Capetown. So imagine how disappointed I

was when the mobile phone I bought in Atlanta didn't work in a resort a few hours away.

Admittedly, consolidation won't be easy. The GSM players are still in building mode. They're struggling with debt, haven't turned a profit, and have relatively few subscribers—just 3.3 million, compared with 7.6 million for AT&T and AirTouch's 8.1 million. If you complete the networks, a roll-up could dilute your earnings, and I know you hate that.

Another downside: The U.S. GSM network, while extensive, isn't really coast-to-coast. Chicago, Dallas, and

New Orleans have no operating system, although VoiceStream has licenses for the first two markets. Furthermore, Baby Bells SBC and BellSouth Corp. provide GSM service in California and the Carolinas, respectively. Neither will be eager to sell out.

SELLING POINT. But consider the positives. First, the GSM network is roughly as extensive as Sprint's and offers nearly the same coverage that AT&T does, if you discount the older analog portion of its system. And if you're looking for mobile data capabilities—a nice selling point for your business customers—GSM is for you. Stan Sigman, president of SBC Wireless, who is working with GSM and two other digital standards, says GSM is a year and a half ahead of the others.

Of course, now that VoiceStream has gotten the ball rolling, you'll have to dig a little deeper. Stock prices of the next two likely GSM targets are already on the way up. Powertel Inc., a Georgia-based carrier serving 12 Southeastern states, has seen its shares surge from 22 to near 30 since the VoiceStream/Omnipoint deal was announced on June 23. Stock in Chicago-based Aerial Communications Inc., with operations in Florida and the Midwest, is up more than 30% for the same period, to 13.

Even so, for the same \$12 billion you considered paying for Nextel, you could get the independent GSM carriers, pay their debts, and put together near-nationwide coverage. Sure, you'll spend more time and money adding customers and equipment and you'll have to cut deals with the Baby Bells. But in the end you'd have a nationwide wireless network. And everyone would stop offering you tips on a wireless strategy.

Rocks covers telecommunications from Atlanta.



COMPANY	PRINCIPAL SERVICE AREAS	SUBSCRIBERS (END Q1)
AERIAL	Midwest, Florida	330,000
BELLSOUTH	North and South Carolina	500,000
OMNIPPOINT	Eastern Seaboard, Florida	478,000
SBC WIRELESS	California, Nevada	1,000,000
POWERTEL	Southeast	338,000
VOICESTREAM	Northwest, Midwest	450,000

DATA: BUSINESS WEEK



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EDITED BY MARK FRANKEL

COX MAKES A BIG CONNECTION

THE CABLE DANCE CONTINUES. In the latest shuffle, Atlanta's Cox Communications announced on July 7 that it would swap 50.3 million AT&T shares it holds, plus considerations worth \$750 million, in return for two cable systems owned by the phone company in Tulsa and Baton Rouge. As part of the deal, valued at \$2.8 billion, Cox will also gain AT&T's 20% holding in a joint venture with TCA Cable TV, which operates systems in Texas, Louisiana, and New Mexico. Cox had already agreed to acquire 80% of TCA for \$4 billion in May. Altogether, the deals will add 490,000 cable customers to Cox, bringing its total sub-

scribers to 5.5 million and filling in gaps in its cable holdings. When the two transactions are wrapped up next year, Cox will be the country's No. 5 operator—unless other deals change the lineup.

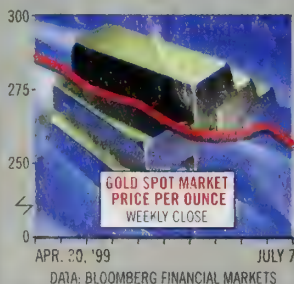
WASTE MANAGEMENT GETS TRASHED

INTO THE DUMPSTER. SHARES of Waste Management tumbled 39% in two days after the nation's top trash hauler said July 6 that second-quarter earnings would not meet estimates because of lower than expected revenues. Officials at the Houston-based company, created last year by the merger of USA Waste Services and Waste Management, said they did not know why revenues came in \$250 million short of projections, but analysts blamed the company's recent 3% rate hike, which drove customers to defect. Waste Management shares closed at 33 $\frac{1}{2}$ % on July 7.

CLOSING BELL

BEWARE, GOLD BUGS

Gold is falling like lead. After the Bank of England began a series of 25-ton sales of its reserves, gold fell to levels not seen since Jimmy Carter was president. The metal traded at \$257.20 in New York on July 7, a 20-year low. And it may fall lower still. The International Monetary Fund plans to sell some 10 million ounces in coming years to pay for debt relief in poor countries. "For us in the West, it's mostly a jewelry item now," says Bernard Penner, a New York bullion trader for Rudolf Wolff.



PAYBACK FOR LTCM'S ANGELS

THE 14 FIRMS THAT BAILED out Long-Term Capital Management can breathe a sigh of relief. The group, including Citigroup and Merrill Lynch, will get back \$1 billion of the money it injected into the hedge fund last year, when LTCM tottered on the edge of collapse, LTCM disclosed on July 6. Original investors in the fund will also be repaid \$300 million, leaving \$2.625 billion still due to outsiders. If LTCM keeps up its repayment record, it will eventually free up LTCM founder John Meriwether to start a new hedge fund.

A HEALTHY HOOKUP FOR AOL

THE FIGHT OVER THE ONLINE health business has ratcheted

HEADLINER: MARYANN KELLER

ZIPPING ONTO THE I-WAY

Maryann Keller, high-octane auto analyst, is the latest member of the old economy to join the dot.com world. But the veteran from ING Baring Furlan Selz is not washing her hands of motor oil; she's the new president of Priceline.com's new automotive unit, building a business that steers shoppers to dealers willing to make a deal below the sticker price.

Priceline.com has proved it can deliver discount airfares and cheap hotel rooms to online shoppers who name their price—which sellers accept or reject. But cars? Why not?

asks Keller. And Priceline's model for selling cars online has distinct pluses.



"We don't have to worry about inventory, service, or trade-ins," says Keller, who is keeping mum on what Priceline is planning for her. "We just have to deliver bona fide customers to dealers."

So will virtual showrooms replace dealers? Not says Keller, 55, who will take Priceline's car business, now in New York, nationwide. "There will always have to be a place to go to look at a car." Until someone figures out a way to kick the tires online.

By Keith Naughton

up another notch. drkoop.com announced on July 6 that it has negotiated a deal to distribute its health-related content over America Online. The four-year contract calls for drkoop.com to pay AOL \$89 million to be the exclusive health-care site on the service that now has 19 million subscribers. drkoop.com CEO Donald Hackett says the startup, which disclosed revenues of just \$404,000 for the quarter before its IPO, will make its money back from advertising and earn extra profits by selling subscriptions and E-commerce. The AOL deal is similar to one signed with Go Network.

DID BOEING BLOCK PROBERS?

BOEING TRIED TO BLOCK A U.S. investigation into race discrimination by denying federal inspectors access to company records, the Labor

Dept. charged in a lawsuit filed July 6. The government initiated the inquiry after black workers filed a class action last year claiming that the company treated them with hostility and denied them promotions. In January, Boeing agreed to pay \$1 million to settle the suit. However, a federal judge delayed approval of the settlement to give some workers a chance to argue for changes in the deal. Boeing denies the charges.

ET CETERA...

- A Miami jury found tobacco companies liable for injuring 500,000 Florida smokers.
- Yahoo reported its second-quarter revenues more than doubled, to \$115 million.
- Vic Doolan, head of BMW North America, will be Ford's new chief of U.S. marketing.
- DuPont will shed 1,400 jobs as part of the restructuring its polyester division.

IT'D TAKE FOREVER TO READ ABOUT THE HUNDREDS OF VALUE FUNDS.

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— Morningstar Mutual Funds 12/6/98

The Van Kampen Equity Income Fund "has hit on some of the past decade's best buys."

— Morningstar Mutual Funds 11/21/98

The Van Kampen American Value Fund "...it's hard to argue with (the success of the Fund's management) thus far."

— Morningstar Mutual Funds 2/5/99

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ED BY LEE WALCZAK

SIDDEENLY, TRIAL LAWYERS RE ON THE DEFENSIVE

One of the nation's most powerful lobbies, with members in briefcases full of cash and boasting of friends in the White House. Yet trial lawyers are on the defensive these days—and bellowing “Objection!” doesn't seem to help. After years of grousing about rapacious plaintiffs' attorneys—and megajudgments from product-liability suits and shareholder class actions—business is beginning to blunt the lawyer's edge. Republicans are intensifying attempts to portray the Administration as in the lawyers' pockets. What's the popularity of GOP governors—led by Texas' George Bush—has made it easier to enact tort-reform initiatives at the state level.

See how far the lawyer lobby has come, one only has to look at President Clinton's recent about-face on GOP-proposed legislation limiting software makers' exposure. Trial lawyers fought hard against liability caps. But a day before front-runner Bush was to appear in Silicon Valley to bash Vice-President Al Gore's intransigence on the issue, White House objections were shelved.

DENONED. Clintonites have been trial lawyers' staunchest defenders, even risk-taking Silicon Valley's ire to veto a '95 bill—quickly overridden—discouraged frivolous shareholder suits. Thanks to the business onslaught, tort lawyers “have been demonized,” says GOP consultant Sal Russo. “This creates a dilemma for Democrats: Side with the public or their contributors.”

Bush, who must fire up conservative GOP primary voters, is being the bar's *bête noir*. He boasts of his '95 signing of a law that tamed Texas' once high-riding plaintiffs' lawyers made it far tougher for consumers to win in court. “I will be on the side of innovation over litigation every single time,” he boomed at a July 1 fund-raiser in Palo Alto, Calif., to attract tech entrepreneurs and venture capitalists. But consumer advocate Ralph Nader says Bush's lawyer-bashing

is “code for: ‘You don't have to be responsible for pollution and stock manipulation because we're weakening the rights of defrauded people to sue.’”

Bush isn't the only Republican scoring at the state level. Some 17 legislatures have moved to limit punitive damages since '95. In Florida last year, the new GOP majority in Tallahassee passed major tort reform. A conservative group ran TV ads lambasting the fat settlements awarded a handful of Democratic-connected lawyers hired by the state to sue the tobacco industry. Then-Governor Lawton Chiles, a Democrat,

vetoed the measure. But it passed again this May and was signed by GOP Governor Jeb Bush. Neal A. Roth, president of the Academy of Florida Trial Lawyers, says the attack is more political than principled. “If [Republicans] dry up lawsuits and the fees lawyers collect, contributions to the Democratic Party will shrivel.”

REDIRECT? Still, lawyers will remain a potent force. The Association of Trial Lawyers of America contributed \$2.4 million to federal races during the 1997-98 cycle. But many now talk of directing far more cash to state legislative races.

Beyond that, trial lawyers contend that the business-GOP alliance risks a backlash if voters view the drive as an assault on consumers' right to sue over dangerous products. In 1996, Californians rejected business-backed ballot initiatives that would have capped jury awards after foes charged the measures were anticonsumer. “What may get applause in a CEO meeting may be a killer [with voters],” says Bob Mulholland, a political adviser to the California Democratic Party.

In theory, he's right. But California, one of the only big states with a Democratic governor, may be atypical. Elsewhere, trial lawyers are quaking in their wingtips.

By Susan B. Garland, with Richard S. Dunham in Palo Alto, Calif.



THE RAINMAKER: A hero—on film

CAPITAL WRAPUP

THE FED'S REVOLVING DOOR

A new study by the Financial Markets Center, a Philomont (Va.) research institute, shows that turnover among Federal Reserve appointees under Bill Clinton is the highest it has been since Harry Truman occupied the White House. Three of Clinton's appointees—Alan Blinder, Janetellen, and Alice Rivlin—left 14-year terms' posts after serving an average of a little more than two years. Why? Center Director Tom Hlesinger cites the diminishing

appeal of public service and the fact that Fed Chairman Alan Greenspan wields much of the power at the bank.

BUSH'S TUPPERWARE PARTY

►What's George Bush's fund-raising secret? Small givers. Bush has netted 82% of his record \$36.25 million in individual donations, far more than rivals. One contributor often recruits other volunteers, who then sign up still more. It's a method used by direct-sales companies, such as Amway and Tupperware. “It's not Amway. It's Bushway,” jokes Bush adviser Steve

Papermaster, chair of venture firm Powershift Group in Austin, Tex.

MORE NET LOBBYISTS COMETH

►Washington has a new power couple. Ex-White House Press Secretary Mike McCurry and ex-GOP Representative Susan Molinari of Staten Island have teamed up on IAdvance, a lobbying venture backed by Bell Atlantic, SBC Communications, and the American Council on Education. McCurry and Molinari will try to help Baby Bells loosen regulatory restrictions on building speedy links to the Internet.

GERMANY

FIXING DEUTSCHE BANK

Defections. Lost deals. Scandal. It's showdown time for Rolf Breuer

Deutsche Bank chief Rolf E. Breuer celebrated his \$9 billion acquisition of Bankers Trust by throwing an outdoor bash in Frankfurt on June 4, complete with confetti, sausages, and cans of Miller beer.

Yet as the month wore on, the exuberance wore off. Highfliers from Bankers Trust started jumping ship, including health-care specialists in Baltimore and high-yield bond experts in London. Then Christian Strenger, chief of Deutsche's mutual-fund arm, stepped down. On June 30, Bankers Trust Corp. Chairman Frank N. Newman resigned with a controversial \$69 million pay package after failing to land a spot on Deutsche Bank's board—and after reports that Bankers Trust used unclaimed customer funds to pump up its bottom line. As if all that weren't enough, Breuer became the subject of a German investigation into whether the bank encouraged clients to evade taxes.

"UNIVERSAL BANK." It has been a rough couple of weeks. But the 61-year-old Bonn native is taking it in stride. Breuer shrugs off the headline-grabbing defections as a natural result of corporate mergers. Over morning coffee in his Berlin branch offices, before hosting a forum on capitalism that in-



Chancellor Gerhard Schröder, he argues that the Trust is full of people who are still open to giving a new employer a chance. "I have little time to win over," he says. "The most challenging test comes in the next months," says Breuer. The clock is indeed ticking on Deutsche Bank. Breuer is trying to transform the bank's biggest bank from a slow-moving, high-cost operation into a nimble financial house. To realize this, he must pull off something no other financial institution has ever done: Marry commercial banking with investment banking's risk-taking culture. Deutsche Bank is trying to achieve this metamorphosis just as the launch of the single European currency on Jan. 1 has changed the rules

HOW DEUTSCHE BANK STACKS UP

BANK	ASSETS BILLIONS*	MARKET CAP BILLIONS	RETURN ON EQUITY	PROFIT BILLIONS	EXPENSE RATIO**
DEUTSCHE BANK	\$756.0	\$32.2	9.9%	\$1.77	78%
CITIGROUP	668.6	150.9	13.9	5.8	56.7
UBS	618.8	38.2	13.7	2.0	81.0
HSBC	467.1	93.7	14.8	4.2	54.9
ABN-AMRO	450.6	31.7	16.5	1.8	70.1
SOCIETE GENERALE	400.0	18.7	13.2	1.1	72.9
BARCLAYS	376.2	45.8	18.2	2.2	66.3

* ASSETS, PROFITS, AND ROE ARE FOR 1998. MARKET CAP AS OF 5/31/99. ** COSTS AS A SHARE OF REVENUES. DATA: MORGAN STANLEY CAPITAL INC., WARBURG DILLON READ, BUSINESS WEEK

and set the dial to warp speed. Corporate mergers and acquisitions in Europe have surged. In the past six months, Europe's debt market has grown 79%. A whole new bond market based on the euro has sprung up in months. The turmoil has already sparked hostile takeovers and mergers of banks in France and Italy. Meanwhile, online trading and banking are making inroads, threatening the margins of the traditional players.

WEIGHED DOWN. Breuer's answer to this scenario of rapid-fire change is to build what he calls a "new-style universal bank" that has lucrative, fast-growing businesses in every financial sector. Affluent young Europeans will buy mutual funds and banking services from Deutsche Bank online. Deutsche Bank will take many of the best young companies in Germany and the U.S. public. It will underwrite bond offerings in Frankfurt, London, and New York. Its asset managers will handle money for institutions from Hong Kong to Sydney to Baltimore. Major European clients who need everything from high-yield debt financings, merger advice, and traditional loans will turn to Deutsche Bank.

Breuer insists that Deutsche Bank has what it takes. Its trading desks dominate the securities scene in Germany. Its asset-management business is one of the biggest in the world. The bank's \$30 billion business in managing euro-denominated bonds makes it

No. 1. Its connections with Germany's hugely prosperous midsize business sector—the *Mittelstand*—are unparalleled.

And yet it's possible that Breuer is spreading both himself and the bank too thin. Deutsche Bank is particularly weak in mergers and acquisitions, the sexiest area with the widest margins. It is already being beaten in its own backyard by the likes of Goldman, Sachs & Co. and Morgan Stanley Dean Witter. In the first half of this year, Deutsche Bank ranked 20th in Europe in volume of M&A transactions, while the Americans continued to skim the

cream of the blue-chip business. No example shows that better than last year's merger between Daimler Benz and Chrysler. While Deutsche Bank owned 24% of Daimler Benz, the auto maker chose Goldman Sachs as its key adviser on the deal. Goldman's large stable of M&A specialists gave it the edge.

Even Deutsche Bank's core commercial banking business is weighed down by an inefficient retail network. Despite repeated restructurings, its costs remain at 76% of revenues, compared with 56% at Citigroup. Economies of scale are hard to come by in the fragmented German market.

So Breuer is not starting from a position of strength. Deutsche's market capitalization, once the highest of all European banks, is now only eighth. Its share price has underperformed the DAX, Germany's key stock index, since 1980. The Asian crisis was a heavy blow. Operating profit was flat in 1998 at \$2.3 billion. Warburg Dillon Read estimates that Deutsche Bank's net return on equity will be only 8.2% in 1999, in the bottom 10% of more than 70 banks surveyed.

Breuer faces his own deadline as well. He has three years left on his five-year contract. "I sometimes have the feeling he's doing too much. One has almost the impression that he has a double or had himself cloned," says a rival banker. Instead of becoming a superstar in commercial and investment banking, Deutsche Bank could remain mediocre at both.

Breuer insists his efforts and those of his top managers are bearing fruit. Operating income could jump 20% this year.

With Bankers Trust he gets knowhow in equity underwriting and high-yield debt and can

beef up his transaction and custody business. Most important, he has an American network that can place the securities of Deutsche Bank's European clients.

But what of the fact that the Americans have cleaned Deutsche Bank's clock in the European blue-chip market? "That is not forever," says Breuer. He thinks Deutsche Bank can get back in the game by launching a flurry of deals in the *Mittelstand*. These family-owned German companies are now in the middle of a generational handoff, and the kids are less sentimental about staying private or selling out. International blue chips such as Volkswagen or Mannesmann may continue to call on the Americans, Breuer says. But he has a huge corporate client base of 150,000 companies just below the first tier. "We knew the grandfather and the father and now the son," says Breuer. "The clients are waiting for us."

Deutsche is building up a presence in underwriting and initial public offerings for these midsize companies. It has been lead manager for eight of the 88 companies that listed on Germany's small-cap Neuer Markt this year and ranks first in terms of volume, at \$849 million.

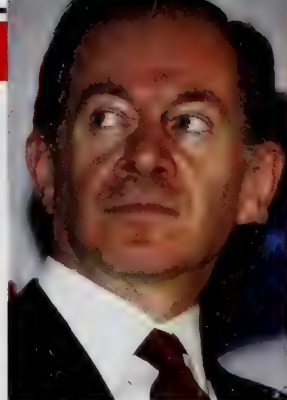
HISTORY REPEATING? In Germany, Breuer is also getting serious about his inefficient retail business. He is merging Bank 24, the online bank, with the retail network and setting it up as a separate profit center. A survey found that 60% of its customers would like to do some, but not all, banking online, so customers can now choose how much advice they are willing to pay for. Deutsche Bank will let rivals use the bank's online services in exchange for taking a stake.

Breuer is very good at articulating these strategies. But can any company pull all this off? The forays into investment banking could still prove more distracting than lucrative. The tide of defections from Bankers Trust is eerily similar to what happened following Deutsche Bank's effort to turn British investment bank Morgan Grenfell into a global investment-banking vehicle. Despite spending big bucks luring heavyweights from competitors, Deutsche Bank didn't make much headway, and many of the stars, including technology IPO wizard Frank Quattrone, have since left for other banks.

In buying Bankers Trust for \$9 billion in cash, Deutsche Bank also paid a high price for what could be damaged goods. The market chaos

triggered by last August's Russian default dealt a devastating blow to Bankers Trust as it struggled to reinvent itself under the leadership of Frank Newman. Sullied by a derivatives scandal, BT recruited the former U.S. Deputy Treasury Secretary in 1995 and installed him as chairman the following year to repair its image.

But the company is still overly dependent on a few businesses that are vulnerable to market upsets, such as junk bonds. And the continuing defections raise questions about the viability of Bankers Trust's key businesses—high-yield bonds, asset management, and high-tech IPOs. "It's still not clear what they really bought with BT, with all the defections," says Raphael Soifer, banking



COSTLY GOOD-BYE
Bankers Trust's Frank Newman jumped ship with a \$69 million pay package

analyst with Brown Brothers Harriman & Co. in New York and a former executive. Meanwhile, on July 6, Morgan Lynch & Co. hired a team of quantitative advisers away from Bankers Trust.

Deutsche has only made real headway in its global fixed-income business, which is much more compatible with commercial banking than other investment-banking activities. It has a powerful global fixed-income business, run of London with an iron hand by ex-

rill Lynch banker Edson Mitchell. In the first half of this year, Deutsche Bank ranked No. 1 in managing euro-denominated bonds for both corporate and sovereign. An insider wonders whether Breuer may wind up going the way of the clays and National Westminster Bank PLC and give up on corporate finance to focus on fixed income.

Maybe Breuer has the backbone needed to keep his investment bankers in line and still keep them working for Deutsche Bank. He should be hard when necessary. He should shake the management board, ousting the old guard and bringing in his own team of people who back the investment-banking strategy. Earlier this year he forced the resignation of CFO Jürgen Krumnow and split the job between two outsiders.

Investors are hoping Breuer's mission is sustainable. ABN Amro's manager Anko Beldsnijder, who manages more than \$1.5 billion of Germany and Europe funds, bumped up his stake. Deutsche's share price has risen 17.7%, to \$5.50, since the merger closed June 1998, against a 9.8% rise in the DAX. "My view on Deutsche Bank is turning from animosity to a general feeling of warmth," says one London-based analyst. That warmth will cool only if Breuer makes good on his promise to whip Deutsche Bank into shape. He has three hard years ahead of him.

By Karen Lowry Miller
Berlin and Jack Ewing in Frankfurt, with Stanley Reed in London and Gary Silverman in New York

BREUER IS MAKING WAVES...

MANAGEMENT Ousting opponents and adding outsiders to the management board, such as a technical expert from IBM, a CFO who worked in industry, and a tough former Deutsche Banker as market-risk manager.

RETAIL BANKING Merging the online banking unit, Bank 24, with the retail banking operations for greater transparency and the flexibility to look for partners.

INVESTMENT BANKING Finally integrating Morgan Grenfell. Secured a foothold in the U.S. by paying \$9 billion for Bankers Trust, bringing skills in high-yield bonds, asset management, and custody services.

STOCK HOLDINGS Spinning off \$22 billion in German industrial holdings into a separate profit center to boost returns and prepare for possible sales of these equity stakes.

...BUT THERE'S A LOT LEFT TO DO

MANAGEMENT Breuer needs to use his remaining three years to break from traditional consensus rule by lifelong insiders.

RETAIL BANKING Make more drastic cuts in costs and staffing; achieve economies of scale by merging the unit with another private bank or insurance company.

INVESTMENT BANKING With top people leaving Bankers Trust and Alex. Brown, the merged units must be speedily structured to retain remaining talent.

STOCK HOLDINGS Unlock some of that capital by selling or swapping stock in creative deals that reduce the 56% tax burden.

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TOTALFINA GOES FOR A GUSHER

Merging with Elf Aquitaine would give it the heft it needs



Thierry Desmarest is one of those rare corporate bosses who thumb their noses at convention. His bold moves, such as his U.S.-defying mega-deals in Iran, have helped turn Paris-based TotalFina from an also-ran to one of the fastest-growing oil majors. But Desmarest's \$44 billion bid for fellow French giant Elf Aquitaine on July 5 is his most audacious yet. The industry has long ruled out such a deal because of the French government's power to block it.

But Desmarest wasn't convinced. In his mind, the two companies were a dream match, with complementary properties across the board. With the industry fast consolidating and huge mergers becoming more common in France, he grabbed his chance. The government, he figured, would see that the combination offered France its best shot at maintaining a leading role in the industry. Desmarest, 53, tried to nudge his counterpart at Elf, Philippe Jaffré, into a friendly merger. But when Jaffré, 54, ruled out a deal at Elf's annual meeting in May, Desmarest pounced. "The quickness of our reaction probably surprised him," Desmarest says.

CONSENSUS BUILDER. So far, his strategy is looking good. The stock prices of both companies have surged, and the French government has endorsed the deal, although it objects to the 2,000 job cuts Desmarest wants in France. But the takeover, like the recent Banque Nationale de Paris bid for Société Générale and Paribas, won't be a full free-market triumph. In both deals,

the government is seeking to deter foreign bidders while encouraging the creation of national champions.

Other political undercurrents swirl around the TotalFina-Elf deal. Privatized only in 1995, Elf was long an instrument through which France exercised diplomacy in Africa, where Elf's operations are concentrated. And as French prosecutors have stepped up their pursuit of white-collar crimes, former Elf managers have been ensnared in investigations of influence peddling, kickbacks, and misuse of corporate funds. Jaffré, who was hired by the conservative government of Edouard Balladur in 1993 to clean up the mess,

A NEW FRENCH BEHEMOTH?

A TotalFina takeover of Elf Aquitaine would create the world's fourth-largest oil company in terms of reserves, production, and market capitalization

MARKET CAPITALIZATION
\$86 billion

RESERVES 9.86 billion barrels of oil equivalent*

PRODUCTION 2.01 million barrels per day oil equivalent*

REVENUES** \$69 billion

NET INCOME** \$2 billion

EMPLOYEES 156,655

*Combined gas and oil

**1998

DATA: PETROLEUM FINANCE CO., TOTALFINA REPORTS

put Elf on a more business-like footing. But his move has riled politicians. A total takeover would throw rid of an irksome CEO, putting Elf in the hands of a consensus builder with vision.

If the deal goes through, it would also create a behemoth that would be No. 4 in the world by industry measures (TotalFina had a net income of \$2 billion in 1998 or \$34 billion in sales, while earned \$600 million on a billion market capitalization). The company would be safe from takeover. But it would still be smaller than Royal Dutch/Shell Group or Exxon Corp. and Amoco PLC.

INSIDE TRACK. Still, Desmarest's new giant will have an edge. Its production is expected to grow at 5% to

over the next few years—compared to 2% to 3% for the bigger companies. If Desmarest ignored the threat of sanctions and signed bold deals beginning in 1995, will be a big help. Through the merger, Desmarest would also gain the properties in West Africa's fast-growing oil fields. And thanks to France's reluctance to toe the U.S. line, his company may gain the inside track in oil-rich Iraq.

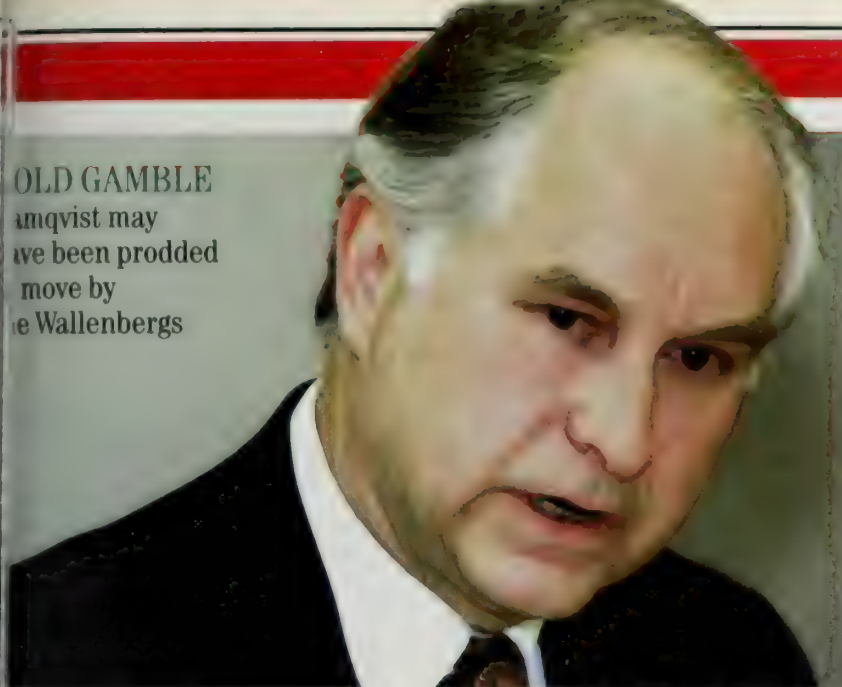
But Desmarest can't notch up a win yet. Elf has dubbed Total's bid hostile and assembled a team of topline investment bankers to work out a defense. Elf, which is only slightly smaller than TotalFina in market capitalization, might even mount a counterbid. It may also seek a white knight such as Chevron Corp. or Texaco Inc., whose merger talks recently broke down. But the most likely outcome may be for Desmarest to up his offer—only a 15% premium over Elf's stock price when announced in return for Elf's management accepting the deal. "I hope that at a late stage we will have the blessing of the board," Desmarest says.

None of this is to say that he'll have an easy time. Even if Desmarest wins his battle, he could encounter difficulties integrating Elf's staffers, who are said to retain a civil service mentality. And much of TotalFina's production comes from politically risky areas such as Burma and Indonesia. But Desmarest seems to have the qualities it takes to lead his company through today's fast-changing oil patch.

By Stanley Reed in London and Gary Edmondson in Paris

OLD GAMBLE

Ramqvist may have been prodded to move by the Wallenbergs



EDEN

OUSTER ERICSSON

Chairman Ramqvist retakes reins from CEO Nilsson

Almost nothing happens in Sweden in July. Businesses are virtually shut down as executives make the most of the short summer season. That's one reason the resignation on July 7 of Christer Nilsson as chief executive of the \$22 billion telecommunications giant Ericsson was such a stunner. Senior executives reached on their mobile phones seemed shocked. "It came as a complete surprise to me," said one. But the shock goes much further. Nilsson will be replaced by a team led by Ericsson Chairman Lars Ramqvist—a very man who tapped Nilsson as his successor as CEO just over a year ago. The other key team member will be newly appointed President Kurt Hellström, who has been running Ericsson's Asian businesses. The 60-year-old Ramqvist says he pushed Nilsson out because he was moving too slowly to implement a cleanup and job cuts announced last December. "This is the best way to improve the company's profitability and effectiveness," says Ramqvist.

Reached by phone, Nilsson declined to comment. Ericsson's share price fell 8%, to \$30.79, on the news.

Ramqvist may well have been influenced to make his bold move by Ericsson's major shareholder, the Wallenberg family holding company, Investor. Under its new CEO, Marcus Wallenberg, Investor has been seeking stronger returns from all its industrial holdings. And Investor's largest outside shareholder, Franklin Mutual Advisers Inc., recently told the Wallenbergs that Nilsson was "the wrong guy" to aggressively market Ericsson's products, says David E. Marcus, Europe investment chief of Franklin Mutual Advisers. Franklin holds 8% of Investor.

Indeed, Ericsson has had a rough time since Nilsson was appointed in March 1998. His tenure's low point may have been the 51% drop in first-quarter earnings to \$155 million on \$5 billion in sales, thanks to losses in Ericsson's fixed-line business and slow mobile

phone sales. Ericsson still trails Finnish rival Nokia Corp. in mobile phone sales and is seen by the market to be falling behind such competitors as Cisco Systems, Nortel, and Lucent Technologies in data communications technology. Although Ericsson's stock price was at near record highs before it plunged on July 7, its multiple in the 30s was well below that of other companies in its sector.

PUNISHMENT. Now, analysts say Ramqvist must make major decisions—or Ericsson could face further punishment by the market. Some say that Ericsson is in too many businesses and should prune further. Ramqvist also will be under pressure to make a major acquisition in Internet technology and data communications, especially in the U.S. For now, though, Ramqvist says that he will stick with Nilsson's strategy. Nilsson was cutting costs in Ericsson's fixed-line telecom business. And he was making small acquisitions in Internet telephony and data transmission.

In fact, Ramqvist may also have a difficult time making major changes. Compared with its hottest rivals, it suffers from a culture that prides precision Swedish engineering over marketing glitz. Only a foreign CEO or a Swedish executive with a radically different mindset might be able to overhaul Ericsson's culture. It may also be problematic for Ericsson to issue shares to fund big acquisitions: Investor would be reluctant to see its stakes diluted. "I don't see them in a position to build up a technology lead," says Theo Wegbrans, vice-president for northern Europe for Cisco Systems Inc. "It takes a lot of money and a lot of time."

Despite his surprise ouster of Nilsson, Ramqvist insists he is only temporarily replacing him as Ericsson's CEO. He wants to find a new chief executive, but isn't revealing

any of his cards on timing—or where he's looking. Shareholders and investors who were hoping earlier this year that Ericsson was over the worst and ready for a turnaround may be in for more tumult.

By Stanley Reed in London and Aram Sains in Stockholm, with Stephen Baker in Paris

Desperate Times

TECHNOLOGY Ericsson is behind in acquiring crucial Internet networking technology, an area Cisco dominates.

PROFITS Profits fell in the first quarter. Its stock has recovered but still lags Nokia's. Another profit shock would slam the stock.

RESTRUCTURING Cuts of some 12,000 jobs are needed but are hurting morale.

DATA BUSINESSWEEK



KEY PLAYER

Asia chief Hellström was named president



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NA

FOREIGN CARMAKERS GET THE GREEN LIGHT

Beijing is starting to let them market the cars they want

For more than 15 years, the handful of foreign auto makers allowed into China have dutifully assembled the cars and trucks prescribed by Beijing—mostly sedans and trucks. If those vehicles didn't make the economic sense. They figured that the red ink and bureaucratic headaches would pay off if and when Beijing gave them permission to sell what they really wanted: their most popular models of vans, luxury sedans, and subcompacts.

That time may have arrived. On June 1, Germany's Volkswagen announced it had won permission to build a small car that would retail for just \$12,000, in addition to the bigger Santanas that it has long assembled in Shanghai. Other makers also hope to make vehicles

with a broader appeal. General Motors Corp., which last year began producing Buicks costing \$10,000 at its new \$1.6-billion joint-venture facility in Shanghai, says it has won approval to convert half of that capacity to make minivans. GM also is seeking permission to make small cars. Audi and Honda are launching new end models, while Toyota may soon be assembling its popular Corolla

and Ford is angling to launch compacts.

Behind the scramble is an apparent shift in industrial policy. For years, China has tightly restricted market access, especially for passenger cars. The government limited the number of players, set production volumes and prices, and dictated what types of vehicles could be made and where. Foreign carmakers have ended up making outmoded vehicles that are too expensive for most Chinese.

INEFFICIENT SECTOR. The result of Beijing's micromanagement is a car industry that is inefficient and glutted with capacity. Except for VW's 230,000-unit-a-year Santana plant, few assemblers have the scale or quality to survive if Beijing fulfills its promise to slash trade barriers

ON THE LOT
Will cheaper foreign cars lift the economy?

when it joins the World Trade Organization.

However, Beijing is now looking for an economic lift from the industry. And despite Prime Minister Zhu Rongji's political problems (page 67), leaders see reform as the way to achieve it. Better, more-affordable cars could help stimulate consumer spending, they hope. Even though the government claims the economy will expand by 8% this year, car sales are virtually flat. Also, the government wants to boost flagging foreign investment. "The whole landscape seems to be shifting," says Michael Dunne, president of Beijing-based Automotive Resources Asia Ltd.

SMALLER ENGINES. Volkswagen's announcement is a breakthrough. Its new sedans, to be designed just for China, would have engines as small as 1 liter. The Santana, priced at \$15,000 to \$23,000, has a 1.8 liter engine. VW also plans to make Passat sedans, priced at \$29,000. GM's change of plans is another sign of official flexibility. GM claims stronger-than-expected Buick sales since the pricey car's April launch. But it will be hard-pressed to sell 100,000 Buicks a year as planned. Getting the approval to also make vans in Shanghai is a big win—and GM wants more. "We still think we're in the running to bring out a small car," says GM China Group President Lawrence B. Zahner.

The liberalization also means consumers will have more choice. Honda Motor Co. has high hopes for its Accord, which will sell for \$36,000. And Toyota Motor Corp. this fall hopes to win the right to produce either its Corolla or Yaris.

The downside of this greater latitude is that competition will be fiercer than ever. Market conditions are expected to only get tougher as reforms in state enterprises lead to massive layoffs. "We

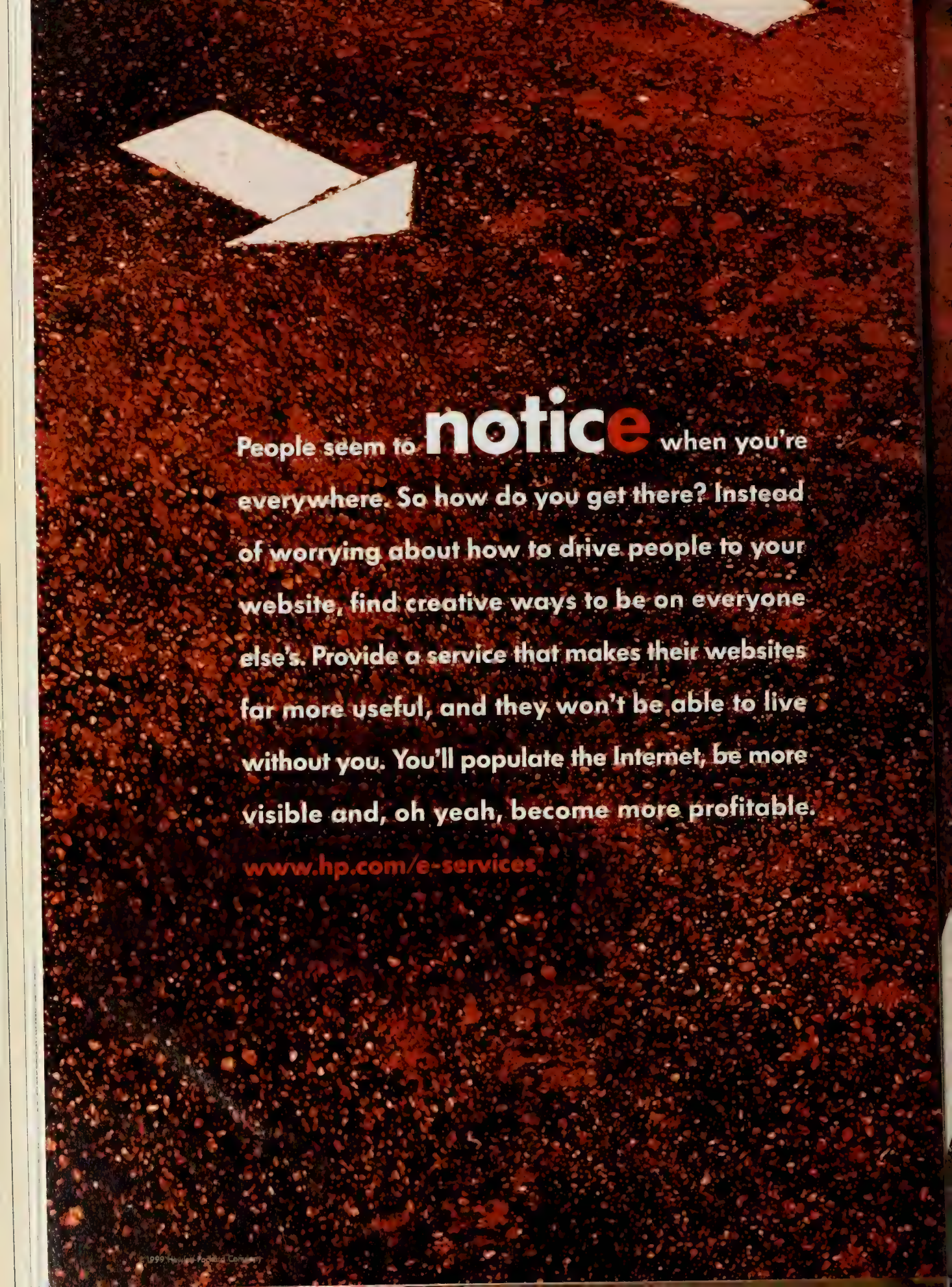
shouldn't be too optimistic about prospects for high growth in sales to individuals," cautions an official of the China Auto Industry Assn. For now, few in the industry seem ready to heed this warning. After years of lusting over China's potential market from the outside, foreign auto makers aim to dash through the door while it's still open.

By Dexter Roberts in Shanghai

MORE LEGROOM FOR FOREIGN AUTO MAKERS

COMPANY	PLANS
AUDI	Preparing to introduce A6 passenger cars in Wuhan
GENERAL MOTORS	Intends to shift some capacity at its new Buick plant to vans; still wants to make Opel cars
HONDA	Has launched Accords in Guangzhou
TOYOTA	Hopes to make Corolla or Yaris cars in Tianjin
VOLKSWAGEN	Plans to make \$12,000 "family cars" and a Chinese version of the Passat in Shanghai

DATA: BUSINESS WEEK



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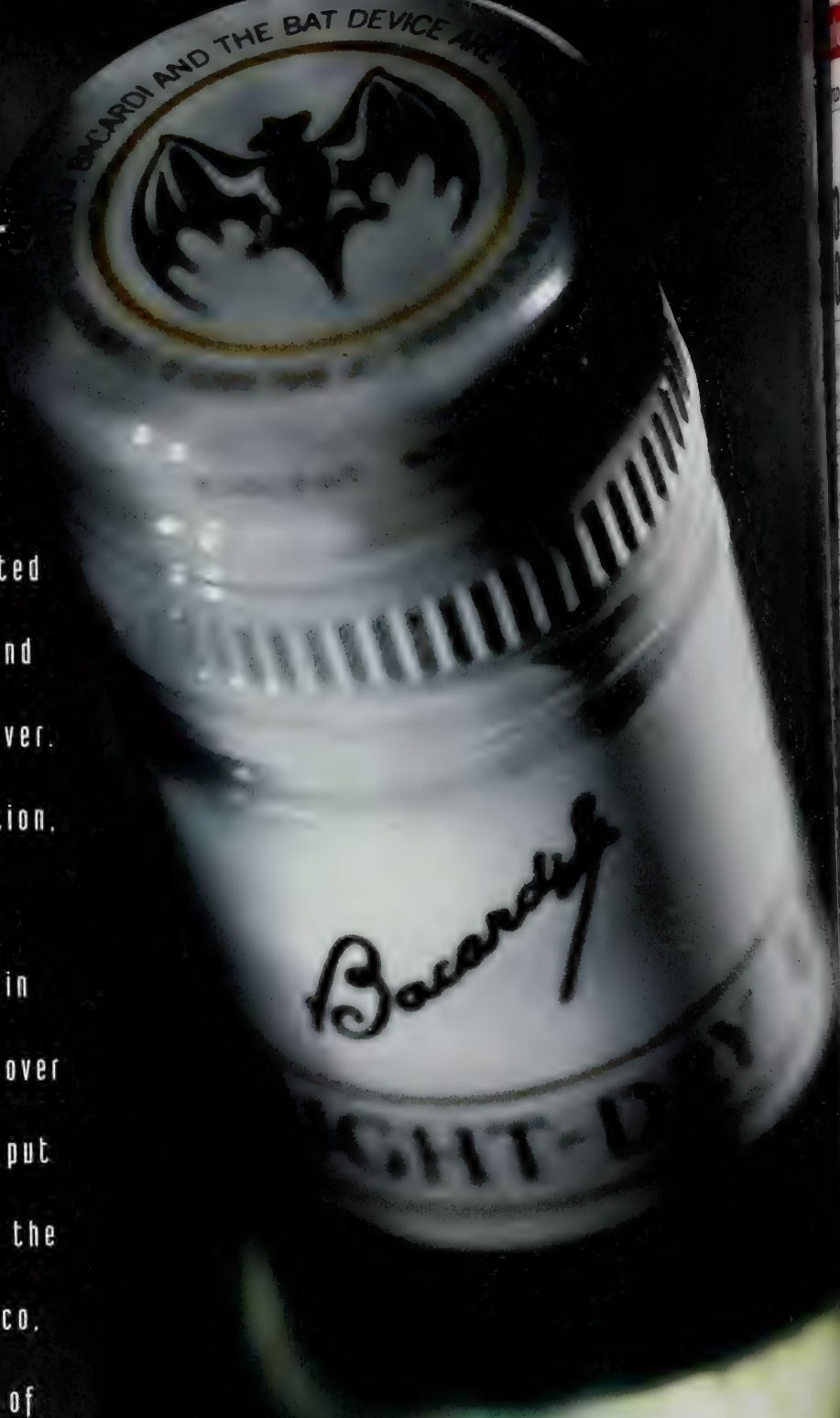
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EDITED BY PAUL MAGNUSSON

HOW ZHU'S FOES COULD UNDERMINE HIS REFORMS

was proof of Zhu Rongji's key role in China's reform—but so a reminder of how shaky his future may be. When rumors spread that the tough-talking Premier had offered his resignation on June 30, markets in Hong Kong, Shanghai, and Shenzhen tumbled.

The bourses recovered after Beijing denied the rumor. But fear remains that China's cadres are waging an internal struggle over Zhu's handling of the economy. As the pain of his reforms deepens, his enemies are multiplying. Even President Jiang Zemin, usually Zhu's backer, is sending hostile signals. One day after the Zhu resignation rumors, Jiang gave a speech lauding the Communist Party and attacking the idea of privatizing state enterprises. "It's part of the repositioning of Jiang," one Western diplomat in Beijing. "It's a message of support to the right that can't like."

SANDBAGGING. For now, it's unlikely Zhu's opponents could oust him from office. For the last decade, the Chinese have avoided firing high officials. And dumping Zhu would trigger very bad press as China approaches Oct. 1, the 50th anniversary of the founding of the People's Republic. The bigger risk is that his enemies could marginalize him by sandbagging further efforts at reform.

The anti-reformists have already found a forum: a resurgent National People's Congress headed by ex-Premier Li Peng, who favors a go-slow approach on restructuring the economy. Many provincial representatives in the NPC, who resent Zhu's efforts to centralize power and taxing authority, back Li. Political observers say conservative NPC members are calling for Zhu to testify about the bombing of the Chinese embassy in Belgrade by U.S. fighters. In another salvo, the NPC has accused the State Council, headed by Zhu, of corruption within its many ministries.

Anti-reformists want to prevent a repeat of Zhu's personal diplomacy in April, when he offered the U.S. sweeping trade reforms to qualify for entry into the World Trade Organization. The NPC is now calling for future WTO terms to be first debated within its chambers. That could force Zhu to backtrack even more on his offer and kill any chance of China's entering the body soon.

Zhu is still intent on reforming state companies and opening the economy more to foreign investment. But the opposition is making things tougher. Afraid of appearing conciliatory, Zhu had to join the rest of the leadership in rejecting U.S. explanations of the Belgrade bombing incident. Emboldened, the conservatives are taking a harder line on U.S. plans for a missile defense system for Asia, the U.S.-Japan security arrangement, and policy toward Taiwan. The atmosphere makes it "difficult to advocate policies that require compromise with the U.S.," admits one senior American official in Washington.

The struggle between Zhu and his rivals will intensify. In late July, the annual party retreat at the seaside resort of Beidaihe takes place. There, Zhu will try to rally support, while Li and others will work to undermine him and his policies. Later in the fall, grassroots opposition to reform is likely to spread. Already, rumors are sweeping Beijing that more than 10 million people will be laid off from ailing state enterprises in the months following the Oct. 1 celebrations. True or not, such rumors could stir up ire against Zhu.

Zhu isn't likely to give up easily: He recently spoke out against corruption and mismanagement surrounding the construction of the Three Gorges Dam, Li Peng's pet project. The feisty Zhu can still take the offensive. Trouble is, his opponents can, too.

By Dexter Roberts in Beijing, with Stan Crock in Washington



ZHU: His enemies have found a forum

GLOBAL WRAPUP

REVIVING ISRAEL'S ECONOMY

Israeli Prime Minister Ehud Barak is hoping to shore up Israel's economy by choosing as his new finance minister Avraham Shohat. An advocate of easy money, Shohat previously held the finance post from 1992 through 1996 under Yitzhak Rabin and Shimon Peres. Shohat, known for his sharp differences with Bank of Israel Governor Jacob A. Frenkel on the nation's tough monetary policies, says that the two will find a way to work together. Shohat's main aim: Get

the economy out of a three-year slump by sharply increasing investments, primarily in infrastructure. Shohat wants a return to the 5% average growth achieved during his previous tenure.

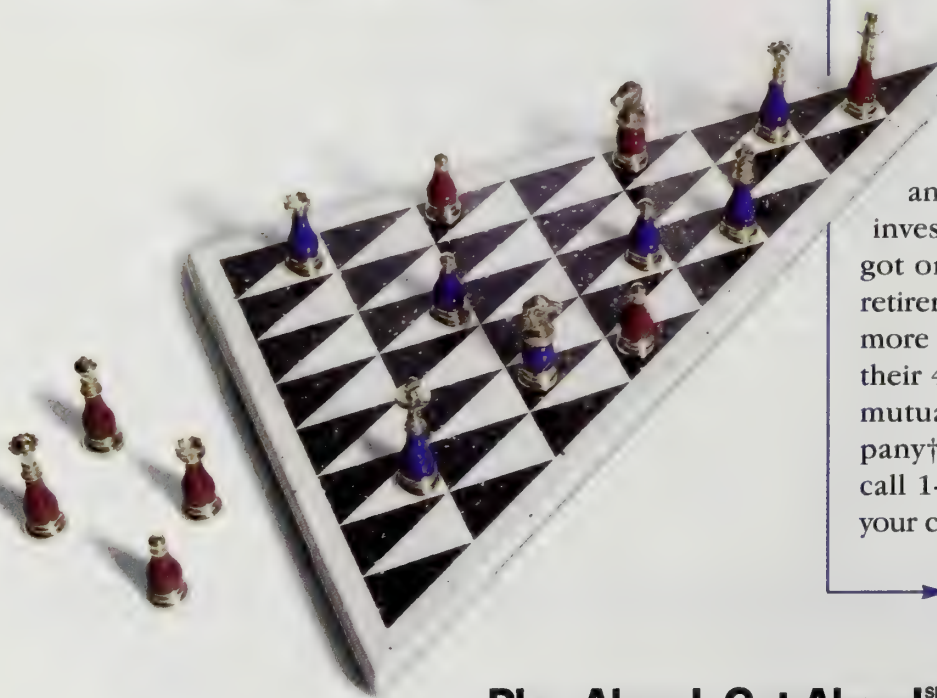
TERROR IN TURKEY

► Turkish security forces are on the alert following a number of bomb explosions in urban areas that are believed to be the work of the separatist Kurdish Workers' Party (PKK). Turkish authorities attribute the terrorism to the death sentence handed

out to PKK leader Abdullah Ocalan last month by a Turkish court. The PKK, which has fought a 15-year war for the creation of a Kurdish state in southeastern Turkey, has generally confined its activities to its mountainous home region, but recent attacks have targeted civilians in major cities. Ocalan, who called for an end to the conflict during the trial, issued a statement through his lawyers condemning the attacks. He intends to appeal the death sentence both in Turkey and at the European court of human rights.

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THE RESOURCE FOR ENTREPRENEURS

SPECIAL REPORT: RAISING CAPITAL

Easy Money

The Low-Rate Loan Glut:
How Long Will It Last?

Finding Capital
Online

How Dangerous
Is Your Debt?

Dirt-Cheap
Credit Cards





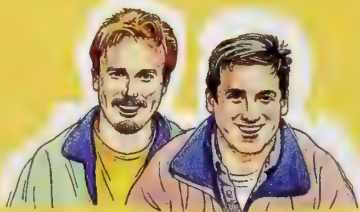
The lobster that made it all the way from Portland, Maine, to Easy Street.

A young boy in Ames, Iowa, runs out to the mailbox. He yanks down the flap and peers in. A package greets his eyes. It's moving slightly. It's smelly. It has *Caution: Live Animals* written all over it. He winces. He takes a breath. Then he runs the box inside, yelling at the top of his lungs, "Dinner is here!"

This is just the sort of scene that's happening around the country, thanks to the online business **TheLobsterNet.com**.

To New Englanders Lance Cleveland and Phil Rose, lobsters were stew meat. But they knew that to some, their product was a delicacy. To people in Tucson. Or Hollywood. Or West Amarillo.

But when they set up their Web site, nobody had heard of **TheLobsterNet.com** so the inventory started to, well, smell. To prevent further spoilage, they resorted to eating lobster dinners every night. (It sounds better than it was.)



Triumphantly, six months and about eight gallons of bisque later, their first order finally came.

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To find new customers, they turned to the marketing solutions at MSN™ LinkExchange®. As the champion of small businesses, MSN LinkExchange is making it easier for online businesses like **TheLobsterNet.com** to turn ideas into profits. And that's exactly what Lance and Phil started to do.

They used ClickTrade, a service where other online businesses who send customers to **TheLobsterNet.com** get a commission. Pretty soon click-thru's to **TheLobsterNet.com** started coming from sites they never would have thought of. One order came from a wedding chapel site. Another from a Florida golf supply site. A big response from the home dating network. (Nothing says lovin' like a live lobster.) Then they used Submit It! to easily register "lobster" with dozens of search engines. So whenever someone types lobster, whether it's "I'm looking for lobster," "I need a picture of a lobster," or "My rash looks like a lobster," their name pops up. They were hot. Dare we say, boiling.

Lobster étouffée is nice, but a healthy portion of profit is better.

Lately, the guys from Maine boast 50,000 online visitors — and nearly 200 lobster orders — every month. For the first time in a long time, Lance and Phil are knee-deep in something other than seaweed.

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to find capital now: Our report on Easy Money con- with an array of resources to you raise capital. Click Extras for a directory. Plus:

DAY

Diary: A wry chronicle of one entrepreneur's struggle to build his business

5 DAY

Manager: How to get the most out of your technology without spending a fortune

WEDSDAY

& Family: Azriela Jaffe helps manage conflicts between your business and personal lives

FRSDAY

Answers: Ask us anything about running your company; we'll answer from top experts

DAY

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Contents

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SPECIAL REPORT: RAISING CAPITAL

F.13 Easy Money

Plastic with no annual fees and low interest. Web sites where investors hook up with startups. Too good to last? Maybe. Grab it while it lasts

F.16 Click Here for Cash

Want a computer date with an angel? Millions in venture capital are chasing good ideas on the Net. But look out for E-scamsters



F.24 Cheap Plastic

Credit cards for small-business owners were never so plentiful—or offered better terms. But not all deals are created equal. No need to sort out the panoply of opportunities—we've done it for you

F.28 Public Offering, Private Doubts

IPO fever is as high among small businesses as anywhere, but you may not have weighed all the pros and cons. Ask the owners of this day-care chain—they've been there

Departments

F.4 InBox

Patriotic entrepreneurs, why women are superior, retirees for hire, getting a line on Linux, and more

F.6 Trends

And you thought debt was the devil's tool: How loading up on loans can be a smart business move

F.8 Who's Hot

All they wanted was a Webcast guide. Seems a lot of other Net surfers did, too. Presto—career opportunity



F.10 What Works

Training programs are a drag, right? Not if you give employees a chance to help design them

F.34 Under 30

Can a callow youth hook up with an Amish cook and build a business? You bet your shoofly pie he can



Cover photograph:
Allen Wallace

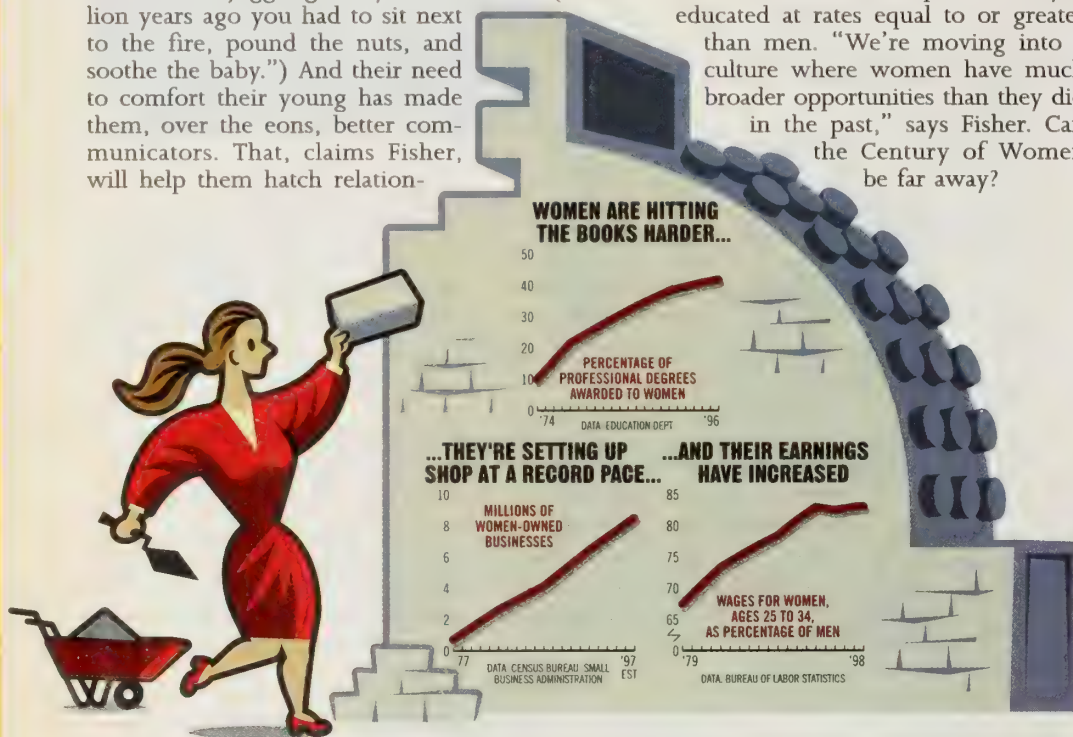
She's All That

MULTITASKER. COMMUNICATOR. Team player. As anthropologist Helen Fisher argues in *The First Sex* (Random House, \$25.95), women possess a set of innate skills suited to entrepreneurial success in the next century's Information Era.

In particular, says Fisher, women are more adept than men at juggling many tasks at once. ("A million years ago you had to sit next to the fire, pound the nuts, and soothe the baby.") And their need to comfort their young has made them, over the eons, better communicators. That, claims Fisher, will help them hatch relation-

ships that are key to building businesses in an increasingly global and partnership-crazed business milieu.

Whether you agree with Fisher or not, she and other economists point to demographic trends that stand to have a huge impact on women's entry into business: Most important, they're now getting educated at rates equal to or greater than men. "We're moving into a culture where women have much broader opportunities than they did in the past," says Fisher. Can the Century of Women be far away?



Startup Nation

PERCENT OF POPULATION INVOLVED IN A STARTUP

COUNTRY

LEADERS

◆ U.S.	8.30
◆ CANADA	6.77
◆ ISRAEL	5.39

FOLLOWERS

◆ ITALY	3.39
◆ BRITAIN	3.30

LAGGARDS

◆ GERMANY	2.18
◆ DENMARK	2.03
◆ FRANCE	1.79
◆ JAPAN	1.57

DATA: GLOBAL ENTREPRENEURSHIP MONITOR

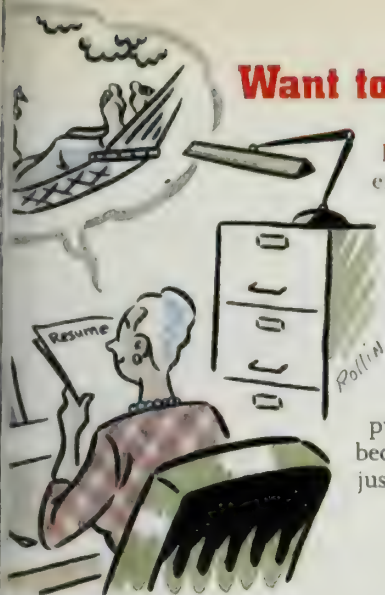
Shop Till You 'Bot

Imagine if a bunch of robots could scour the country to find you the best prices on office supplies, computers, and business books. Imagine no more. On the Web, an evolving breed of shopping 'bots (short for, yes, robots) simultaneously search dozens of E-commerce sites and report back on the choicest deals.



SHOPPING 'BOT	PROS	CONS
JANGO BY EXCITE www.jango.com	Forty-two categories from tea to satellite TV, some with product reviews.	Confusing interface. No shipping or merchant info. Painfully slow.
MYSIMON MySimon.com	Searches 1,300 sites. Espouses independence, so as not to favor—or exclude—particular merchants' offers.	No shipping data. Limited office-product categories.
CNET Shopper.com	Most sophisticated info, including details on shipping and handling costs, product guarantees, and service options.	Limited to computers and tech gear.

Want to Hire? Think 'Retire'



AS IF THINGS COULD get any tougher in the hiring market: A new study from the independent Employee Benefit Research Institute shows that retirement plans are becoming ever more crucial in attracting and retaining workers at companies that have fewer than 100 employees. Among the 602 surveyed companies that offered a plan, 33% cited "recruiting advantages" as what's driving their retirement benefits, up from 24% in 1998.

Plans are also key to keeping employees happy: 28% of companies said they offered them because they improved employee morale, up from just 16% last year.

Look, I'm a Patriot

DON'T THINK that starting a business patriotic element? Well, consider that ours have been responsible for about 80% of all U.S. economic growth during the last expansion. That's the preliminary finding of a research team that studied entrepreneurial cultures in 10 countries. The team, drawn from Babson College and London Business School—found that where start-ups have been encouraged and where there is socially acceptable gains in gross product have been the most successful. Entrepreneurs in more countries (table) have more jobs and overall personal freedom than do cultures held back by huge, immovable institutions.

SO THEY SAY

"At the tail end of a strong economy, history tells us that people do deals they shouldn't do."

—MIKE R. JAMES, of Wells Fargo, on why it's so easy for entrepreneurs to get funding (page F.14)

Does welfare-to-work work?

62% of small companies that hired ex-welfare recipients say they stayed on as long or longer than other entry-level workers

ONE IOTA

Hold That Linux

BY NOW, YOU'VE HEARD the hype about Linux, the robust—and, best of all, supercheap—operating system favored by legions of geeks. Should your small business actually consider converting its desktops from a Mac or Windows system? The short answer: Wait. Linux does great work on servers, but development of easy-to-use business applications still lags, say experts. Indeed, unless you're a part-time hacker, you might not be able to make much sense of the computerese in the forthcoming Red Hat Linux in Small Business (IDG, \$29.99). The Linux community "is only beginning to learn to speak to mainstream businesses," says Kim Morrison, sales director at e-smith, an Ottawa (Ont.) maker of Linux software. She says to take another look early next year, when more desktop software will be ready for novices.



FRONTIER
ONLINE

News and advice from our small-business Web site

The Pinchpenny Phone

The big guys get all the great deals. Take those corporate long-distance plans, where companies' expensive telecom software scans the rates of competing carriers and directs employees' calls to the cheapest available rate. Now a fledgling Bedford (Mass.) startup, MediaCom Co., is trying to use the same "least-cost routing technology" for small business. Its recently launched MegaMiser system (\$200 for 10 separate lines) helps companies pick through the long-distance thicket, via PC software and a small device that attaches to the phone.

Touching Up Your Image

All right, you scruffy-looking workaholics. It's time to pack away the cut-off jeans and get your image in shape. A new flock of sartorial advisers is helping over-stressed, underdressed entrepreneurs pick the right duds for corporate presentations and business confabs. What are the most common faux pas detected by these *fashionistas*? Outmoded styles and the wrong accessories. As in, no matter how rich you are, don't show up bedecked in gold chains.

Uncle Sam's Treat?

Scheduling a summer getaway around a business trip? As long as the trip's primary purpose is work-related, you can write most of the expenses off as business-related tax deductions; the pleasure is considered incidental. Got a Monday meeting in Seattle, for instance? Travel over a Saturday night to get the cheapest airfare, stay in a hotel over the weekend, and sightsee on Sunday. Although your meal deduction is limited to 50%, you can write off the largest portion of the entire trip's cost—travel and lodging.



For the full stories, click Online Extras at frontier.businessweek.com

In Debt—and Loving It

Borrowing can be a boon, especially at today's rates

HERE'S A NOVEL concept: Maybe your company has too little debt, not too much. If that sounds completely daft, it's no wonder—debt is often portrayed as inherently evil. But there's little doubt that it's on the rise. Integra Information Inc. of Flanders, N.J., which tracks small-company balance sheets, crunched numbers from 1.7 million businesses for frontier and found debt averaged 71.6% of net

prudently conservative by not following the crowd, says Eric G. Flamholtz, a professor at the University of California at Los Angeles' John E. Anderson School of Management, but you could actually be taking more risk by not borrowing enough money to keep up. "You can wait too long," he says. "A contrarian strategy can kill you."

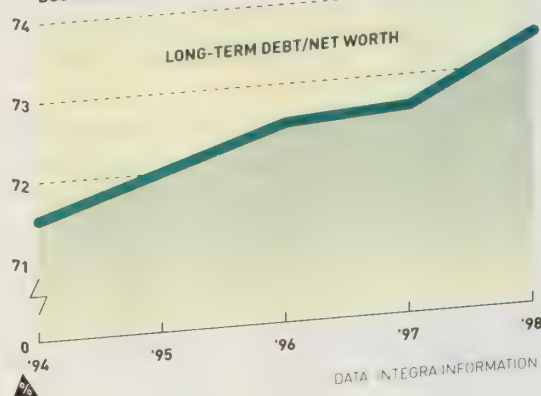
Indeed, the decision to load up on loans in recent years looks pretty smart, given how cheap small-business borrowing has been (page 13) during the long economic boom. Whether your debt level is right or wrong also depends on how you compare with your true peers—rivals in the same business and the same size group. For instance, small companies in finance, insurance, and real estate have an average debt-to-net worth ratio of 188%, up nearly 30 percentage points since 1994. But the average at wholesalers is 35% and has been falling for five years.

Another big factor, of course, is your individual situation. If your cash flow is dropping, you'd do well to keep your debt levels below the norm. What is the norm? You can buy a peer-group comparison for \$60 to \$300 from vendors such as Integra (800 780-2660 or Dun & Bradstreet (800 552-3867). But if you're aggressive and your rivals look weak, maybe it's time to borrow and build—instead of striving to be average.

—RICK GREEN

Other People's Money

SERVICE COMPANIES MAKE UP THE BIGGEST BLOCK OF SMALL BUSINESS, AND THEIR DEBT LEVELS HAVE BEEN CLIMBING.



worth in 1998, the third straight annual increase. At small service companies, which represent the largest sector, the trend was even more pronounced (chart).

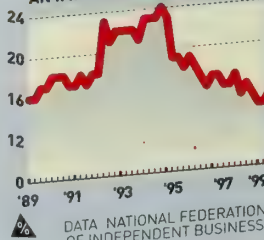
But you can't look at only the raw numbers. Debt is just a business tool, neither good nor evil. Use too much of it, as everyone knows, and you'll go bust. Use too little, though, and you may still go belly-up if your rivals are using debt to expand their businesses—and take away yours. You may think you're being

For detailed data on debt levels at small companies, click Online Extras at frontier.businessweek.com

Unwinding Red Tape

Not too many years ago, government regulation was right up there with taxes on the list of top gripes among entrepreneurs. Today, the concern has dropped to levels not seen since Reagan was President. Have things really improved? Is there less red tape as the millennium approaches? Perhaps not, says economist Bill Dunkelberg at the National Federation of Independent Business. The problem merely may have been pushed aside by a heavier concern about where small companies can find quality help in a tight labor market.

PERCENTAGE OF SMALL COMPANIES THAT CONSIDER GOVERNMENT REGULATION AN IMPORTANT PROBLEM



CURRENTS

Newfound Status

Now that entrepreneurs are getting respect on par with big companies, you can also expect to get more junk mail. That's because Trans Union LLC, one of the biggest credit information companies, has begun matching the names of 5 million small-business execs with information about their income, spending credit—and home addresses.

Such information, compiled from more than 60 sources, is a gold mine for direct marketers, many of whom are small businesses themselves. The goal is to help them find good business-to-business prospects, on the theory that the buying habits of small companies will reflect the habits of the people who run them. The idea is to reach you at home where there's no gatekeeper to screen your mail or phone calls.

What about your privacy? The raw databases are supposedly available to the public. But Trans Union does provide a spot on its Web site (www.trans-union.com), where you can get your name deleted. (Want to buy the list? It'll cost you anywhere from 1¢ to 30¢ per head, depending on the level of detail.)

Cram Course

Have you been "crammed"? Check your phone bill for "miscellaneous services." That's where the Federal Trade Commission says fraudulent fees are popping up for services that were never ordered or never used. The agency estimates 300,000 businesses have been hit with charges for phantom Internet services from upstart providers. The charges of about \$30 show up on your monthly phone bill—much to the chagrin of the Bell companies that handle the resulting complaints.

How can you prevent it? Try reading your statement. Officials say this kind of scam succeeds because the perpetrators are counting on you not to examine your bills too closely.



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Right Wavelength

Peter Johnson figured the world needed a tuner for Web radio. His idea is beginning to click

WHENEVER WINTER workdays in New York started to drag, software designer Peter Johnson escaped to Australian summer—without leaving his desk. He just tuned in to Aussie rock stations broadcasting live across the Internet. But Johnson, now 29, wondered what he was missing in the exploding world of Net radio. Hundreds of stations Webcast blues from Antarctica or news from Tehran, yet no one provided a simple way to find and connect to the feeds.

free with plans to sell an advanced version once they had built a following. Called the vTuner, it was a Yahoo! for radio, listing and reviewing more than 1,800 stations by category and country and rating them for speed, sound quality, and selections.

The vTuner impressed software critics, and by June came The Call—or in this case, the E-mail—that drives so many Internet dreams. RealNetworks Inc. expressed

interest in a partnership. Real controls at least 80% of the booming market in players for “streaming media”—audio or video that plays as it downloads. What drew the company to the vTuner team? “They had a winning idea but were also ready to listen to our feedback,” says Dave Richards, vice-president for consumer products. The Real deal offers a customizable version of vTuner at a half-price \$14.95 with a paid copy of RealPlayer. The boys get a cut. And while Real won’t break out sales, the manager of its online Realstore.com calls it “one of our better sellers.” Word of mouth alone brought 200,000 downloads before Real started to market it.

There’s lots of potential left; worldwide, 60 million copies of RealPlayer have been downloaded, and experts say streaming media is in its infancy. The vTuner took in just \$130,000 before the deal, but 1999 revenues are estimated at \$1 million.

Meanwhile, there’s competition from rivals such as Earth Tuner, made by DigiBand Inc. of Alpharetta, Ga., but vTuner has a head start and high hopes. Stay tuned.

—SREENATH SREENIVASAN



Read about other breakthrough companies. Click Entrepreneur Profiles at frontier.businessweek.com.

INSTANT EXPERT

THE ISSUE:

How will population trends affect your business in the next century? Year 20 census figures won’t be available for long time, but there is no shortage of forward-looking data.

THE SOLUTION:

Thanks to proliferating federal and state Web sites, statistics about the U.S. population can be viewed online at little or no cost. For help interpreting data, check out book and Web sites and get advice from your local Small Business Development Center.

CASE IN POINT:

Geoffrey Larsen, president of Alaska Brewing Co., an \$11 million specialty brewery in Juneau, used U.S. Census Bureau population forecasts to assess the size of the Echo Boom population that’s nearing drinking age.

RESOURCES

WEB SITES:

U.S. Census Bureau (www.census.gov). Check out “State and County QuickFacts,” which links to detailed state and county data about businesses and consumers.

FedStats (www.fedstats.gov) links to specialized statistics and experts from more than 70 federal agencies, ranging from the Federal Reserve Bank to the Fish & Wildlife Service.

BOOKS:

Statistical Abstract of the United States 1998 (118th edition) (National Technical Information Service, 1-800-553-NTIS). This annual compendium of federal data is easiest to use in book form but free online at the Census Bureau site.

The Cartoon Guide to Statistics, by Larry Gonick and Woollcott Smith (HarperCollins, 1993). Engaging and accessible cure to dataphobia. Intuitive graphics.



FAB FOUR: Litt, Harrison (foreground), Kristjansson, and Johnson's vTuner drew RealNetworks' interest

He decided to fill that gap with three entrepreneurial pals: high school buddy David Litt, 28, an accountant at Morgan Stanley, and computer whizzes Orn Kristjansson, 30, and Stasiu Harrison, 25. The four worked off-hours for three months or so. Then, bankrolled by about \$70,000 in collective savings and family loans, they quit their day jobs at the start of '98. Incorporated as Nothing Else Matters Software Ltd.—named for a favorite Metallica song—they had launched a Web site by April, offering the product

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Live and Learn

How one company developed a training program that workers actually like



VOX POPULI: McHenry's first program was a bust, so she tapped employee input to help develop Gold Horn University

CAN COMPANIES TRAIN employees to be more productive, successful, and fulfilled in this competitive labor market? More than 54 million people are receiving formal training from employers nationwide—with decidedly mixed results. Some employees, once trained, take their newly enhanced skills off to another company. Others get discouraged by useless classes. That's because many employers still use an outmoded, cookie-cutter approach to training that doesn't encourage creative thinking and self-reliance, says Diane Gayeski, a training consultant and professor of organizational communications and learning at Ithaca College in Ithaca, N.Y.

For Julie McHenry, chief executive of Wilson McHenry Co., a Foster City (Calif.) strategic business communications company with 60 employees, it was clear that her mandatory training program wasn't working. In fact, a consultant's survey revealed that employees hated it. They complained they were all forced to take the same classes, regardless of their needs. So last year, McHenry put together an em-

ployee task force to come up with an appealing alternative.

The result? Gold Horn University, a voluntary training program where employees register for the courses of their choice each semester by the company intranet. Classes take place over a brown-bag lunch in an informal setting. While no one is forced to take a class, managers, referred to as "advisers," may nudge employees to take courses they feel would be helpful. Sessions, taught by experts within the company and occasionally by outsiders, tend to be practical, such as how to write a press re-

lease or conduct a media tour.

It's too soon to judge Gold Term's long-term impact, but McHenry says turnover is down: "Employees are happier, bottom line. Especially here in Silicon Valley, where it's so competitive with employers, we need to keep them engaged."

Gold Horn is a good recruitment tool as well, helping to lure employees like Sean Pate, an account associate.

McHenry has learned some valuable lessons herself: "Training needs to be flexible, and it needs to be done in a way in which staff feel they are in control." To that end, a five-employee committee runs the program.

Interested in trying something similar? Keep classes small, practical, and highly interactive, says McHenry. Above all, make the program engaging and fun, and you might just get an A-plus from your staff for making training a perk instead of a chore.

—GABRIELLE SAVERI



Learn more about how to train employees. Click Online Extras at frontier.businessweek.com

SMART ANSWERS

Q: How can I position my online gallery to get the publicity it deserves? —A. A., New York

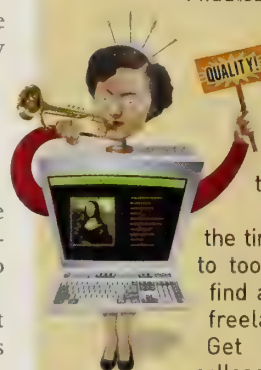
A: To build media buzz, you have to rise above the clutter and highlight the way your company differs from your competitors. Just being online is no longer newsworthy. Focus your message on customer service, detailing how you're helping customers navigate the world of E-commerce, advises Harlan Pforzheimer, executive vice-president of Silicon Valley-based Edelman Public Relations. If your clients can tell your story through quotes or anecdotes, so much the better. Be willing to talk about both successes and failures.

Can you craft a dramatic story and sell it to the press yourself? Absolutely. Send your press releases to traditional media—newspapers, magazines, trade journals—and Web sites, says Don Middleberg, who publicizes Web sites at Middleberg & Associates

in New York. Always follow up with a phone call. Make your case succinctly and stress any timely angles.

If you don't have the time, money, or ego to tout your own horn, find a small agency or freelance consultant. Get references from colleagues, competitors,

editors, and reporters. You'll want someone with contacts, credibility, and personality. "A good PR person should be a door-opener who gets out of the way of your story. And it shouldn't cost a fortune," says Jack O'Dwyer, a PR industry analyst. Agencies get paid monthly retainers starting at \$1,500 and project fees starting from \$1,000, depending on the scope. For more help, check out the Web site of the Public Relations Society of America (www.prsa.org) and O'Dwyer's Web site (www.1pr.com). —KAREN E. KLEIN



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SPECIAL REPORT: RAISING CAPITAL

What's behind the glut
of cheap money? Who's
got it now? And how can
you get some?

Easy

IT USED TO BE that entrepreneurs went to the bank to apply for a loan with hat in hand and maybe even a set of kneepads, in case the begging got really intense. Not anymore. This is the era of the low-grovel loan. A flood of new capital is heading for small companies, and it's not coming just from traditional banks. Any business owner who opens the mail is likely to find an offer for a credit card with a generous

line of credit. Go on the Web and you can get almost-instant loans. You can also cruise through matchmaking sites with access to thousands of lenders and equity investors. Venture capitalists, backed by big institutions and pension funds, are handing out money at a record pace. "All the stars are aligned," says James D. Atwell, global managing partner for private equities at PricewaterhouseCoopers LLP (PWC). "There is a ton of money out there."

And it's cheap, too. Interest rates on commercial loans up to \$100,000 fell to 8.82% during the second quarter, from 8.87% in the first quarter, according to the Federal Reserve, while rates on larger loans were rising. Even assuming the full brunt of June's rate hike by the Fed is passed along, you'd still have to go back to 1994 to find a better deal. Credit-card rates have fallen to single digits, too, as new issuers vie for your business by offering free airline miles, product discounts, and other goodies (page 24). Loan approvals have been cut from several weeks to less than a day.

It sounds like it's too good to last, and it probably is. Lenders are prone to boom-bust cycles in which they throw caution to the wind, only to pull back sharply when—*surprise*—many of the loans go bad. But for now, small borrowers have the upper hand, thanks to a combination of strong supply and weak demand. With the economy speeding ahead at a 4% growth rate, small businesses have less need for loans than in past years because they can finance much of their growth from profits. A PWC survey of



America's fastest-growing small companies found that only 23% planned to get a loan as of late 1998. And the National Federation of Independent Business found in its May survey that only one-third of its members borrow regularly, a

figure that has been dropping for 20 years. Few said that they thought it was particularly hard to get credit.

At the same time, there's a lot of new money available. Data released last month by the Small Business Administration show outstanding small-business loans reached \$371 billion as of June, 1998, up 6.3% in 12 months. The actual number of loans rose 1.3 million, or 16.7%. Venture-capital investments hit \$17 billion last year, according to PWC, up from \$1 billion in 1991, which is part of the \$175 billion in private equity chasing small companies. Startup financing from the federal Small Business Investment Co. program, which serves as seed capital for private loans, has tripled to \$3.7 billion in four years. Then there's \$37 billion in small-business credit-card debt outstanding, a 25% increase over 1997, says *The Nilson Report* of Oxnard, Calif., plus uncounted billions more charged on personal cards by owners of weak or new companies that cannot qualify for business credit.

One reason lenders are more willing to lend is that they no longer have to hold all the loans they make to maturity. Using tactics borrowed from mortgage markets, loans are being packaged by the hundreds and sold to institutional investors as AAA-rated securities—which

by Janin Friend

Money

ensibly means they have the same sterling cred-
rating as, say, IBM or General Electric Co. Sounds
ubtful? Perhaps, but that's not the lender's prob-
n: They pocket the fees you pay up front.

If it seems like lenders can't give money away
t enough, it's not for lack of trying. Take the new
anWise E-commerce site, introduced late last
onth. It snaps through a small-business loan ap-
val in just five minutes. A small-business owner
n obtain an unsecured loan of up to \$50,000
electronically filling out a brief application. After
s submitted, credit history and possible lenders are
most instantaneously checked by computer. If the
plicant qualifies, he gets the approval within a
ad-snapping matter of seconds. The money is
ailable from American Express Co. or several par-
ticipating banks in 24 to 48 hours. "It transforms
e experience of getting a small-business loan,"
ys Michael S. Grossman, chief executive officer of
etEarnings in Burlingame, Calif., the parent of
anWise. "People don't think something like this is
ossible."

Other Internet financiers include Atlanta-based
bank.com Inc., launched in late June, which claims
be the first virtual bank targeting small business,
id VentureShowcase.com, which plans to launch a
ew video matchmaking service for investors and
ntrepreneurs in July—one step beyond the text-only
Web pages (page 16). That's just the beginning.
bout 20 more banks will likely launch online op-
erations aimed at entrepreneurs in the next 18
onths, says Octavio Marenzi, research director at
feridien Research in Newton, Mass.

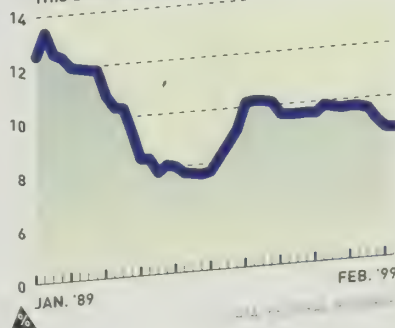
Traditional banks are responding with stream-
ned loan procedures, easier terms, and mass mail-
ngs. Technology helps them, too: Automated "cred-
scoring" and other computerized ways to assess
isk have cut costs by reducing labor, research, and
aperwork. Access to better small-business data also
as made financing faster and easier. "Before cred-
scoring, there was no way a bank could make a
20,000 loan without losing money," says Amy
i. Geogan, executive vice-president at Bank Boston
orp. Now, some banks can turn around a loan, us-
ng only a one-page application, in about 24
ours—and for a fraction of the previous cost.

But there's a price to be paid. Bankers and venture
capitalists say their rivals are driven by competition
to make deals doomed to fail. Some lenders are
pricing their product too low for the risk involved,
and others are doing deals not backed by sufficient
collateral. "It's a war for market share," says Craig
Sheinker, president of Quantum Resources Fund-
ing, a New York City firm that buys accounts re-
ceivable. "Almost everybody is dropping rates, and
almost everybody is doing airball deals."

Granted, that's good for borrowers in the short
run. But over the long
haul, it means lenders
could lose big should the
economy take a dive and
drag many small compa-
nies under. Indeed, entre-
preneurs could be overex-
tended if they borrow too
heavily based on revenues
generated in boom times.
"At the tail end of a strong
economy, history tells us
that people do deals they
shouldn't do, and history
tells us they will do it
again," says Mike James,
executive vice-president at
Wells Fargo & Co., the
No. 1 small-business lender in the U.S.

The likely result: a swing of the pendulum back
toward less favorable rates and stiffer terms as fin-
anciers, already holding bad loans, become reluctant
to make new ones. The problems could be com-
pounded this time because of the new lending
techniques, such as business credit cards and cred-
it scoring, that have never seen a real recession.
"None of it has been stress-tested," notes William
C. Dunkelberg, economist at the National Federation
of Independent Business. The message for entre-
preneurs is clear: Get it while you can—and don't
get used to it.

The Best of Times
RATES ON SMALL COMMERCIAL LOANS
OF UP TO \$100,000 HAVEN'T BEEN
THIS LOW SINCE 1994



Which lenders have the best rates and terms
for small companies? Click Online Extras at
frontier.businessweek.com.



ROCKY ROMANCE
Martineau learned a lot seeking
capital on the Web—but says it's
a tough way to sell "sizzle"

Click Here for Cash

The unsung wonder of the Web: It can be a haven for venture capital

ON THE INTERNET, no one has to know where your company is located. So Russ Fletcher and his partners figured they would have no problem basing their Net startup, HealthDirectory.com, in scenic but isolated Missoula, Mont. "We wanted to live in a place we loved," says Fletcher, chief executive at the online publisher of physician directories.

But out on the Bitterroot Range, it's easier to find bighorn sheep than investors—let alone venture capitalists. So to raise the \$5 million he



needs to take his service worldwide, Fletcher went back on the Web—and located Venture Capital Online (Vcapital.com), a Chicago-based online network. HealthDirectory's business plan, tuned up under Vcapital.com's tutelage, snared the attention of six firms, whom Fletcher is interviewing to find the best fit for his enterprise.

"For companies in a remote area like ours, the Internet offers an excellent way to at least get in front of investors," he says.

The World Wide Web is turning into a Capital Web for entrepreneurs. New companies are springing up that use the Internet's connective power to link idea-rich entrepreneurs with cash-rich investors. The result can be a streamlined funding process that leapfrogs over the geography-bound personal networks of traditional ven-

by Mike McNamee

ILLUSTRATION BY JIMMY K. TUCKER

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Executive Summary:
This report provides a comprehensive overview of the company's performance over the past year. It includes key financial metrics, market trends, and strategic insights. The data is presented in a clear and concise manner, allowing for easy interpretation and decision-making.

Financial Performance:
The company has achieved significant growth in revenue, with a 15% increase compared to the previous year. This is primarily due to the successful launch of our new product line and the expansion of our market reach. Additionally, our operational efficiency has improved, leading to a 10% reduction in costs.

Market Trends:
The market has shown a strong upward trend, with a 20% increase in demand for our products. This is driven by the growing awareness of our brand and the positive feedback from our customers. The competitive landscape remains dynamic, with several new entrants in the market.

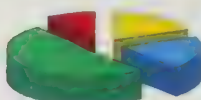
Strategic Insights:
Based on the data, we recommend focusing on the following areas for the upcoming year: 1) Continued investment in research and development to stay ahead of the competition. 2) Expansion into new markets to diversify our revenue streams. 3) Strengthening our customer relationships through personalized service and loyalty programs.

Conclusion:
The company has made remarkable progress over the past year, and we are confident in our ability to achieve even greater success in the future. We will continue to innovate and adapt to the changing market conditions, ensuring that we remain a leader in our industry.

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Quarterly Report

Chart represents regional sales



Next Quarter Focus

- In-Store Training Representatives
- Sell-In / Sell-Out Inventory Balance
- Web Sharing and Commerce Programs
- Customer Data Requirements
- Manufacturing Cost and Inventory Sites
- Product Profiling and Consumer Usage

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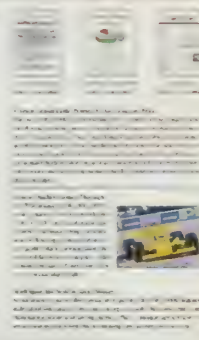
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ture finance to form virtual networks that span the nation—or the globe.

Moving the hunt for capital online doesn't take the work—or the risks—out of the search. The Net's anonymity means companies must keep up their guard against funding scams or middlemen who will publish corporate confidences far and wide. "The Internet doesn't change the basic rule: know who you're dealing with," says William L. Walton, CEO of Allied Capital Corp., a Washington-based small-business lender.

The promise of Web capital is that it will expose an entrepreneur's bright ideas to many more potential investors. The details vary, but most online financiers work like this: A company seeking capital can submit an electronic form via the financier's Web site. If the prospect's business seems likely to match investors' interests,

the banker will work with the firm, via phone or in person as well as by E-mail, to refine its business plan and put it in a format investors

like to see. The banker then distributes the plan without identifying the company, to investors. If they're interested, they tell the banker, who introduces them to the company. The banker might put together a deal, or let the investors and prospect negotiate directly. The banker takes a cut from the deal's proceeds and, in some cases, also takes a stake in the prospect's stock.

Like other venture capitalists, the best Web financiers demand a lot of work from their investment prospects. A finely honed business plan and energetic focused management still are crucial to success. And many entrepreneurs have learned that the online hit rate isn't necessarily any higher than that of old-style finance.

Caren J. Martineau, for one, feels the winnowing process of online finance took the romance out of her business—literally. Martineau approached Vcapital.com for a \$4 million investment in her firm, Romance Boutique, an online gift catalog and shopping service for lovers. The service put her through weeks of eye-opening preparation before it posted her Web presentation on its site. The pitch drew requests for a full business plan from more than a dozen venture capitalists—but none followed up. Martineau blames the "dry" format of an online pitch: "The process doesn't let you sell the sizzle of your business," she says. "For a venture like ours that's based on romance and emotion, that's deadly." The Glen Ridge (N.J.) CEO is now negotiating financing with Orbital Capital, a New York venture firm.

The best new-wave Web financiers try to match a carefully screened portfolio of companies with a similarly vetted network of high-net-worth individuals and private and corporate venture funders. Take garage.com, based in Palo Alto, Calif. Founded by computer marketing expert and former Apple Computer Corp. executive Guy Kawasaki, garage.com has signed up more than 1,000 "accredited" investors—a Securities & Exchange Commission category that, for individuals, requires net worth exceeding \$1 million or three years of family income topping \$300,000. These angels congregate in Heaven, a password-protected Web page where they can view pitches from companies selected and groomed by garage.com's partners.

And how does a venture get to Heaven? Tripwire Security Systems Inc., a maker of software to detect tampering with corporate and government databases, was introduced to garage.com by an investor who had helped CEO W. Wyatt Starnes with seed capital. Garage.com's investment bankers helped Starnes refine his business plan, which they then posted in Heaven. When intrigued angels responded, they got an E-mail introduction to Tripwire. For Starnes, the final deal included two pleasant surprises: Tripwire was able to raise \$2.4 million, up from an initial target of \$1.5 million, and its investors include a major venture capitalist. Six months later, the investor and Tripwire

The best online financiers astutely match companies and potential backers



DIVINE: Starnes's security business raked in capital on the Heaven Web page

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Expanding Possibilities



are discussing a follow-up round.

New players are crowding into Web finance. After managing his own company's \$2.5 million private stock placement in November, 1998, CEO Greg Halpern of Circle Group Internet decided to expand his Web-site development business into investment banking. The Mundelein (Ill.) firm has bought a broker-dealer and built a list of accredited investors out of a database of 324,000 online investors. Circle Group now has nine private placements in the works—all for clients of its main Web-authoring business.

It's not just high tech: Old-line outfits are getting lucky, too

Not all Internet financiers are newly hatched. The Capital Network, an Austin-based nonprofit, has raised more than \$50 million in seed funding for 2,500 companies since 1989, through a

computerized match-up of business plans with investors' interests. TCN still pitches its 20-plus prospects each month to investors via snail mail—but most business plans are now submitted to the network's Web site, and TCN is moving toward Internet and Webcast presentations for investors.

High-tech firms have been quickest to tap the Internet for capital, but old-economy businesses are getting a chance, too. OffRoad Capital Corp., with a network of investors spanning 48 states, plans to do private offerings for operating businesses in any industry. "Revenues and profits still matter more than having a 'dot.com,'" says OffRoad CEO Stephen Pelletier. Entrepreneurs also can tap the Internet even if they would rather work with traditional bankers. Since 1995, Direct Stock Market has provided a marketplace for 115 direct public offerings, either self-registered by issuers or managed by small broker-dealers. The Santa Monica (Calif.)-based company's advantage, says CEO Clay H. Womack, is the low cost of E-mailing prospectuses and putting road shows online.

With so many investment services pitching themselves on the Web, how can an entrepreneur guard

against scams? One clear giveaway is a for-profit banker who demands hefty fees up front from a client. "Legitimate bankers take their compensation out of the back end, from the proceeds of the deal," says Philip A. Feigin, executive director of the North American Securities Administrators Assn. That should go double for venture funders, since their lifeblood is a steady flow of business plans to present to investors.

Another danger sign: services that demand confidential technical or financial details without signing nondisclosure agreements or stating who will see the information. Even traditional venture capitalists can leak business plans to other firms they are involved with—and with a Web-based investor network, you can't tell who will end up reading your company's plans. Besides, investors don't need such detail for preliminary screens: "If you can't explain what you're doing without getting into bits and bytes, you need to revisit your business plan," says TCN Assistant Director Paul L. Myers.

Investigate any potential investor or banker just as thoroughly as you would an investment you're making. When Auren Hoffman was seeking funds for Bridgepath.com, a San Francisco-based firm that helps headhunters use the Internet to manage their businesses, he demanded that would-be financiers provide the names of clients they had funded. "Most of them just never called me back," says Hoffman, Bridgepath.com's president.

Hoffman gave up on online financiers after checking references on six firms in 1998. Instead, he tapped a traditional angel network to raise \$1 million plus. But now that he needs a second round of capital, he figures he can turn the financiers' tools back on them, using the Internet to research which venture firms—and even which partners—will be most receptive to his pitch. Even without an Internet banker, the Web can speed the flow of capital to entrepreneurs who need it.



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Found Money

Where are the search engines for finance? Here are some of the leading sites.

WEB ADDRESS	TYPE OF FINANCING	TARGET AMOUNTS	DESCRIPTION
VENTURE CAPITAL ONLINE www.vcapital.com	Seed and Venture	\$150,000 to \$20 million	Network of 100 VC firms spanning wide range of industries and funding targets
GARAGE.COM www.garage.com	Angel	\$500,000 to \$3 million	Selective has picked only 25 of 4,600 business plans submitted during company's first six months
THE CAPITAL NETWORK www.thecapitalnetwork.com	Seed and first stage	\$250,000 to \$1.5 million	Nonprofit matching service; most investors and ventures in the Southwest
OFFROAD CAPITAL www.offroadcapital.com	Late-stage Venture	\$1 million to \$10 million	Wants companies in any industry preparing to issue an IPO or grooming themselves to be acquired
DIRECT STOCK MARKET www.dsm.com	IPO and private placement	\$500,000 to \$10 million	Lists IPOs and private placements sold directly by companies or by small brokers
CIRCLE GROUP INTERNET www.circlegroupinternet.com	Venture to IPO	\$2 million to \$50 million	Plans to offer investment banking for clients of its main business, Web-site development

BUSINESS WEEK



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Cheap Plastic

Credit-card issuers have slashed interest rates below 10% and pumped up the perks



WANT DISCOUNTS on stuff you buy for your small company with a credit card? No problem. Want to earn airline miles for every dollar you charge? Plenty of cards let you do that. Want a cheap interest rate? Well, now, there's a new idea.

The last time BUSINESS WEEK looked at small-business credit cards, in 1997, an annual rate below 16% was extraordinary. But this year, competition has pushed rates into single digits, and the range of product discounts and freebies is so vast that some entrepreneurs are building them into their business plans.

Just ask Robert B. McKinley, president of CardWeb.com Inc. in Frederick, Md. Last year, he used an American Express Corporate Platinum card to charge everything from temp workers to online domain names. That helped him rack up so many points with airlines, hotels, and other services that he arranged a free one-week trip to Paris for two with seats in business class and stays at four- and five-star hotels. Later, he went to London for \$900, using 20,000 points to sit in business class, an upgrade that would have cost him \$5,300. (The trip entitled him to 15,000 new points since he charged the fare on his card.) Still not tapped out, he created an employee benefit by shipping lobster-and-clam dinners to each of his 14 employees as a Christmas gift, and he sent about half a dozen more to clients.

"It's kind of a currency unto itself," McKinley says.

If he seems unusually adept at this game it's no wonder: McKinley's company is one of the leading independent monitors of credit-card offerings, and he conducted a survey of small-business cards last month at BUSINESS WEEK's request. It's a booming field. Last year, there were 9 million small-business cards outstanding, up 15% from 1997, carrying lines of credit worth \$36.8 billion, up 25% in a year, according to *The Nilson Report*, a financial newsletter in Oxnard, Calif. PSI Global, a financial consulting firm, estimates that 49% of all small companies have the cards, up sharply from 37% in 1998. They're embracing cards in part because of the discounts, and also because cards help them track and manage expenses. New or weak companies like them because credit-card loans are their big source of capital. Whatever the reason, the cards aren't overly hard to get: A Federal Reserve study suggests bankers are mass-mailing applications in lieu of genuine efforts to make small-company loans.

The result: a glut of cheap plastic. CardWeb's survey located about 100 cards from more than 70 issuers and found three offering rates below 10% (table, page 26). What's more, 6 of the top 10 low-rate cards charge no annual fee. That's a far cry from the situation in 1997, when 15% was the





going rate and each card came with hefty fees. Chevy Chase/First USA, the low-cost leader at 9.9%, even throws in a six-month teaser rate of 3.9%. In some cases, issuers offer several different cards depending on whether your goal is low interest rates, low fees, or lots of re-

wards. American Express Co. alone offers more than half a dozen, including a version mailed out this spring offering cash rebates of up to 2% on all purchases and a clone of the Optima that gives free miles on Delta Air Lines. Citibank re-

sponded last month with a card tied to American Airlines. What's more, the number of business-to-business services that accept credit-card payments has expanded to include thousands of outsourcers and wholesalers, and that helps rack up extra discounts and airline miles.

So what's not to like? Plenty. ("There's always an asterisk," McKinley notes wryly.) First of all, you're not getting that low rate unless your credit is strong. Otherwise, expect to get bumped up to a more punishing rate from the start. In most cases, the rate is tied to the prime, so it could rise if the Federal Reserve keeps putting upward pressure on interest rates. (Indeed, some of the interest rates quoted here may have already moved up by the time you read this). And even though you have to hand over up to three years of company financials, nearly every issuer still wants you to personally guarantee payment. If your company goes bust, or an employee runs amok, they'll come after you.

What about all those discounts on things like gasoline, office supplies, and hotels? They're potentially quite lucrative, so long as you would ordinarily buy those items from those particular vendors. But in some cases, McKinley says, the

"discounts" may be applied to prices that have been jacked up first. The best deals usually come on cards with high annual fees or high interest rates—American and Delta charge a punishing prime plus 9.99%—so you come out behind if you plan on carrying a big balance. (If you do pay off your bills each month, consider trading up to charge cards like AmEx at Diner's Club. Not only is the list of benefits broader, but you also get more flexibility. Diner's Club, for instance, gives bonus points that can be used with a wide variety of airlines.)

And this "free" stuff isn't likely to stay that way for long. Don't be surprised if your own customers start pressuring you to let them pay with credit cards, which would cost you a 1% to 2% transaction fee. The cost may be worth it, says David Robertson, president of The Nilson Report, who says the cards are becoming a genuine management tool. For starters, they're displacing letters of credit in small-business transactions. The appeal is the instant gratification: You don't have to worry about collection costs or late payments. "The money is going to be in your account tonight before you even ship the merchandise," he says. Card users also get management help in the form of periodic statements that help break down expenditures by category. Nilson expects you'll soon be able to download them into accounting programs such as QuickBooks to help you analyze and control your spending. An unqualified blessing? Hardly. But plastic doesn't seem quite as flimsy anymore.

—RICK GREEN

For more credit cards and features, and to keep track of rate changes, click Online Extras at frontier.businessweek.com



Top of the Deck

A sampling of rates and perks offered by small-business credit cards. All offer grace periods of 25 days.

ISSUER	TYPE	APR*	FEE**	PHONE	PERKS
CHEVY CHASE/FIRST USA	V/MC	9.90%	\$0	800 937-5000	3.9% for first six months. Discounts on car rental, hotels.
CORPORATE OPTIMA PLATINUM	A	9.99%	\$0	800 782-2377	Discounts of 10% to 25% with IBM, FedEx, Hertz, Hilton. Credit line up to \$50,000.
FIRST USA PLATINUM	V	9.99%	\$0	800 346-5538	Extended warranty protection on purchases; travel accident insurance
BANK ONE	V/MC	10.65%	\$0	800 820-8062	Discounts from Office Depot, Avis, AlphaGraphics; extended warranties.
GE CAPITAL	V/MC	15.50%	\$45	800 554-0581	Discounts from Avis, Exxon, Budget, Dollar, Hyatt, Radisson, Standard Register, overnight delivery services.

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—Michael Dubelko

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Public Offering, Private Doubts

The Dunkleys did an IPO for one company but held tightly to the other



THE OFFICES of William M. and Susan K. Dunkley are where you would expect them to be. He's chairman and CEO, she's president, and they sit in the corner of an L-shaped, single-story building in Plymouth, Minn., near Minneapolis. But these corner offices are about more than status. The corner literally divides the Dunkleys' business life in two. To the right is the headquarters of New Horizon Kids Quest Inc., a publicly held company that operates children's entertainment centers. On the left is the home office of New Horizon Enterprises, a privately owned chain of day-care centers.

Life wasn't always so disjointed for this couple, who hold the same titles in both companies. For 28 years, they built the private New Horizon Enterprises into a successful, Minnesota-wide operation in the low-margin business of full-time day care. Then, in 1995, they split off the entertainment component in an initial public offering.

Few small-business owners straddle the public and private realms, but the Dunkleys wanted to experience the benefits and burdens of public ownership before giving up control of New Horizon Enterprises, too. That ambivalence had a price. The public company was



FUN: A New Horizon center

too small to issue the shares needed for an active market in its stock, and the Dunkleys are disappointed in its performance. While the current mania for new issues makes it seem otherwise, an IPO is not always like a winning lottery ticket. But the stock proceeds did help them expand their business and take risks they would otherwise have avoided. So was it a mistake? You decide.

The private New Horizon had its roots in a church basement where

Susan Dunkley—a former elementary school teacher—started a nursery school in 1971 while her husband was in law school. As William, who also has a business degree, started his practice, the couple launched a chain of day-care centers. By the early 1990s they were pulling in some \$35 million in revenues.

That's when Lyle Berman, then CEO of Grand Casinos Inc. in Minnetonka, Minn., approached the Dunkleys seeking a quality child-care provider willing to open pay-by-the-hour entertainment centers for gamblers' kids. The Dunkleys were reluctant until they learned that gamblers sometimes left children in cars or hotel rooms so they could hit the tables.

Says Susan: "People are going to gamble, [so] if we can make an en-

by Hilary Rosenberg

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vironment where the kids are separated from the gaming and safe and having fun, we could do a service."

Also, the Dunkleys saw a business opportunity, since many casinos were turning into "family resorts." With most of the financing provided by Grand Casinos, they designed a center that featured a climbing structure, Lego blocks, and other activities. The first Kids Quest opened at the Grand Casino in Hinckley, Minn., in 1992. Within two years, New Horizon Enterprises, in partnership with Grand Casinos, opened six more centers.

With the Kids Quest centers thriving, the Dunkleys began thinking about taking their business public. Some major brokerage firms, including Lehman Brothers Inc., were excited about the idea. But the Dunkleys were nervous about putting everything they had worked for into a public company subject to a raft of new costs and regulations. "We had



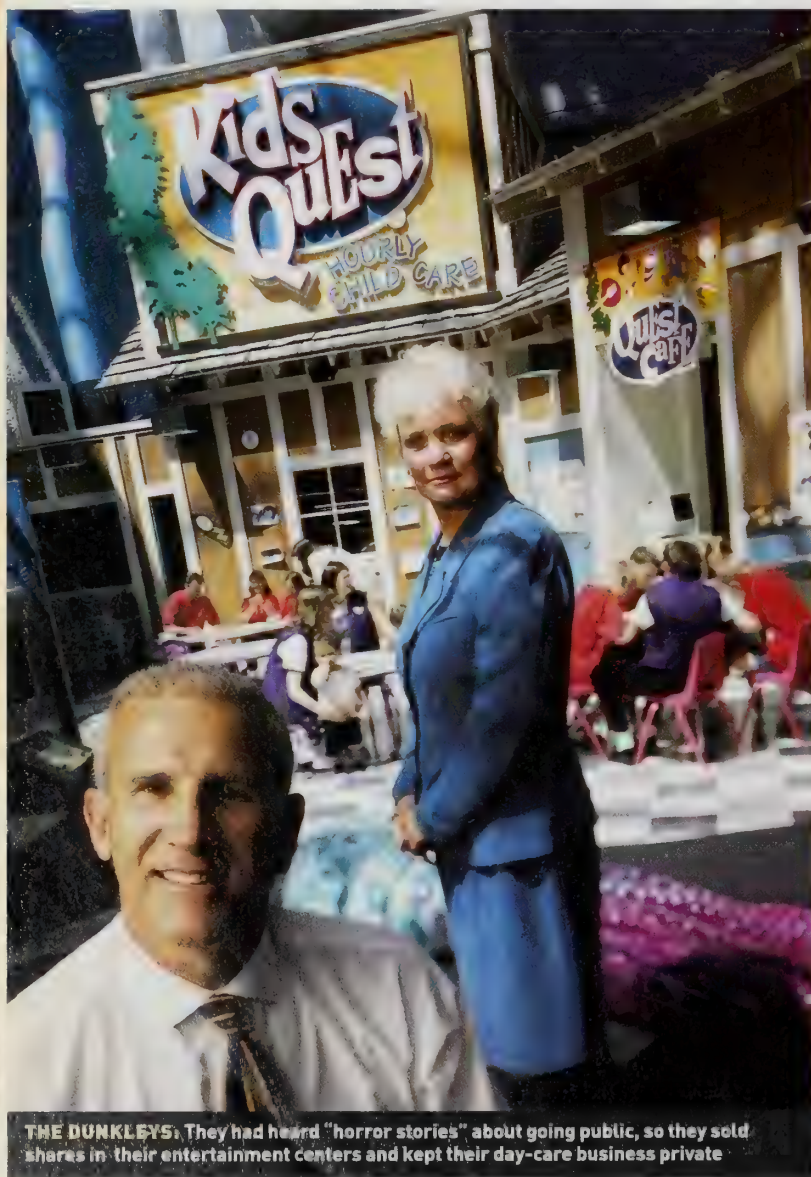
heard horror stories about being public," Susan says. So, having heard investment bankers call the Kids Quest operation "the sizzle" of the deal, the Dunkleys thought: Why not give investors just the sizzle? They decided to spin off Kids Quest and use public financing to pay for its growth—a two-pronged strategy that included operating traditional day-care centers in new states.

However, going public with the small operation meant there were fewer shares to sell, and, because the Dunkleys and Berman wanted to keep control, there would be a small "float"—that is, shares available to the public. The Dunkleys own 25% of outstanding shares and the company Berman runs, Lake Gaming, a spin-off of Grand Casinos, owns 26.6%. The IPO involved 1 million shares at \$5 per share compared with an offering of \$30 million if the private company had been included. Too small for big brokerages, the IPO was handled by Equity Securities Trading Co., a Minneapolis boutique specializing in small, or "micro-cap," issues.

Things started out well. Issued in November 1995, the stock hit \$12 within six months, then settled at \$7 to \$8. The company plowed the proceeds into new centers; today there are 19 Kids Quest facilities. IPO funds also helped the public company acquire and develop traditional day-care businesses in Boise, Idaho, where it now operates 14 centers. Last year, the company chalked up \$15.6 million in revenues and netted \$21,508. The private company has grown more slowly, adding five centers since 1995 for a total of 49. (Annual revenues top \$35 million. It's profitable, but the Dunkleys won't disclose earnings.)

The public company's growth is due, in part, to its ability to take risks the private one—and its 100% owners—can't. For instance, the Idaho day-care centers have been unprofitable far longer than expected. "We have lost \$2.5 million in Boise," says Troy Dunkley, executive vice-president and the founders' son. "We wouldn't have had that to lose in the private company. We would have been out of business." But the downside of public ownership has been just as evident. Being public is costly—from the \$750,000 IPO to the \$250,000 annually for documents, auditing, and accounting. That would be all right if the stock did well. But since the second quarter of 1998, the stock has been trading on the NASDAQ SmallCap Market below \$3 a share. Few people are surprised. The market wants to see regular earnings increases, and Kids Quest has been growing unevenly.

Another problem: The float is too small for institutional investors such as pension and mutual funds, so Kids Quest can't benefit from the stabilizing effect they have. Yet, with its stock in the doldrums, Kids Quest can't do a secondary offering to replace the exhausted IPO proceeds. Instead, the company has borrowed more and leased more equipment than it otherwise would have—supplementing fairly strong cash flow. Also, the company's stock options, given to employees as incentives, are pretty much worthless at exercise prices of \$4



THE DUNKLEYS: They had heard "horror stories" about going public, so they sold shares in their entertainment centers and kept their day-care business private.

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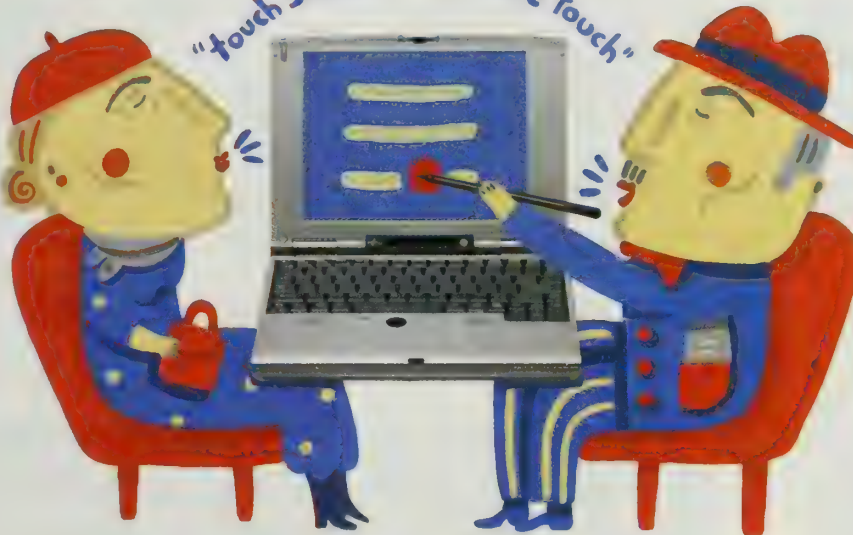


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and higher. "We've created a business nobody else has and expanded it," says William Dunkley, 50. In the public markets, "it doesn't seem like there's justice."

While the Dunkleys expand the business for the long term, they feel the market's pressures. But on the private side, they enjoy freedom from short-term concerns. "The private company still has its privacy and can do what it wants to do," says Kevin Greer, who recently left as CFO of both companies.

Despite disappointments, the Dunkleys did benefit



from this public-private hybrid. Although they each spend half their 80-hour weeks at New Horizon Kids Quest, they spare the company the expense of their salaries, getting paid by the private company. The public company uses the private one's resources on an as-needed basis (keeping track for accounting purposes), and they combine their buying power. The Dunkleys wouldn't mind taking the company private again because they think it is undervalued, but they can't afford it. Their long-range plan is to merge the companies and do a secondary

offering. So they are determined to make the company and the stock, a success.

Meantime, the new CFO Patrick R. Cruzen, says he will try to stir interest among analysts and brokers. And some shareholders still believe. Pete Monson, an investment exec at Global Financial Group in Minneapolis, still buys shares because it's a "good value." They could be a takeover target down the road." That might make it a worthwhile.

Going Public

For many companies, an IPO is a mixed blessing.

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Cons:

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Give Me the Simple Life

Can you make a business out of Amish recipes? You bet your shoofly pie

Kevin L. Williams stepped into his entrepreneurial life seven years ago in the gravel driveway of Elizabeth Coblentz, a 61-year-old member of the Old Order Amish in Northern Indiana. Inspired by a high school research paper and sheer "entrepreneurial hubris," Williams, then 19, was knocking on strangers' doors in Amish communities throughout the Midwest, searching for someone to write an Amish cooking column he planned to syndicate. It was sheer luck that he found Coblentz on her 100-acre spread near Fort Wayne, Ind. Despite an eighth-grade education, she had nonetheless written community news for an Amish paper since 1952 and was a master of Amish recipes.

It took some cajoling before Coblentz signed on to write "The Amish Cook," penning her columns by candlelight. (Her beliefs don't allow her to be photographed.) But for Williams and his Oasis Newsfeatures, the work was just beginning. From Middletown, Ohio, he had to sell jaded newspaper editors on a column that seems to be

ripped from the pages of a 19th century church bulletin.

Williams dropped out of college and struggled for years, but he slowly signed up small-town papers—mainly in the Midwest. Readers adored Coblentz' intimate dispatches from a farm life that has all but vanished. "What made it unique is that it wasn't just a recipe column. Every week, you got a peek into Amish life and values," says Mike Hilfrink, an editor at the Quincy (Ill.) *Herald-Whig*. Now "The Amish Cook" runs in 92 cities, including big dailies in and around Chicago, Indianapolis, Cincinnati, and Fort Wayne. While socking away 55% of the syndication fees, Williams has licensed a line of Amish Cook pies and signed a deal with grocery giant Kroger Co. for delicacies based on Coblentz' recipes.

Revenues will hit at least \$100,000 next year, Williams says, and Kroger is eyeing a distribution plan that could prove lucrative. "This is something I've built since I was a baby," says Williams, "and it's just now getting fun."

—DENNIS BERMAN

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DIABETES: IS A CURE ON THE HORIZON?

Islet cell transplants look promising, but huge obstacles remain

Nine rhesus monkeys playing with their toys at the University of Miami are the great hairy hopes of diabetes. In a major advance announced in June, the monkeys were partially cured of the disease after receiving transplants of islet cells, the insulin-producing components of the pancreas. The key was an experimental rejection drug called anti-CD154. This engineered antibody, made by Biogen Inc. of Cambridge, Mass., is far less toxic than immunosuppressants taken after other types of organ transplants. After the transplant, the monkeys no longer needed insulin injections or anti-rejection drug.

It is still a very long way from monkeys to people, of course, and a small human safety trial of the drug is only just starting. Still, says Dr. Norma M.yon, associate director of research at the University of Miami's Diabetes Research Institute, "if it works as it has in monkeys, within two to three years,

islet transplantation could be widely applicable in humans." She is the lead author of the monkey study, just published in the *Proceedings of the National Academy of Science*.

The Miami monkeys are only a small part of a massive effort to come up with the ultimate cure for the 850,000 people in the U.S. diagnosed with insulin-dependent Type I diabetes, the most severe type. Their islet cells have been destroyed by their own immune system—without daily injections of insulin, the hormone that metabolizes sugar, they would die.

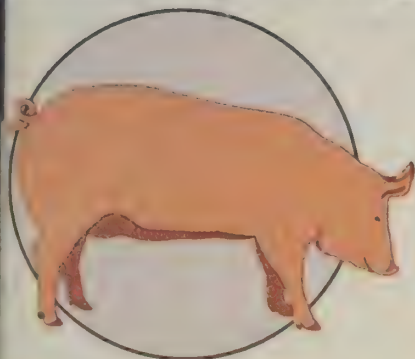
Now, these patients have their own Manhattan Project: Thirty-two world-class scientists from universities, hospitals, and private companies across the U.S. have formed the Center for Islet Cell Transplantation. Based in Boston, the center was founded last September with a \$20 million grant from the Juvenile Diabetes Foundation to perfect the one sure cure for diabetes.

From Massachusetts to Minnesota, the center's surgeons, chemists, engineers, and biologists are pooling their knowledge on a broad range of technologies. "I think there is reason to be enthusiastic," says Dr. Hugh Auchincloss Jr., director of the Islet Center and professor of surgery at Harvard Medical School. "It's a much, much more complicated problem than people thought 20 years ago. But now there are new technologies that offer exciting possibilities."

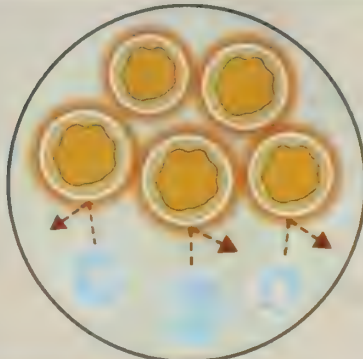
SHORTER LIFE. The incentives to find a cure, both financial and humanitarian, are enormous. Nearly 16 million Americans suffer from diabetes, a disease that can shorten life expectancy by a third. Medical experts estimate that some 5% to 10% of diabetics have Type I, also called juvenile diabetes because it usually strikes in childhood. Even with daily insulin injections, these patients face a lifetime of medical risks, including heart disease, kidney failure, blindness, nerve damage, and circulation so poor

THE CHALLENGE OF CURING DIABETES

Type 1 diabetes, also known as juvenile diabetes, occurs when the body's immune system attacks and destroys the insulin-producing islet cells in the pancreas. The only cure, scientists believe, would be to come up with a method of transplanting islet cells. But to do so, they must overcome several obstacles.



SUPPLY About 1 million islet cells, located in island-like clusters in the pancreas, are needed. But human donors are scarce, so researchers are trying to obtain the cells from other species, primarily pigs.



IMMUNE SUPPRESSION When cells are transplanted, the immune system must be kept from destroying the new islets. Scientists are attempting to protect the cells in a porous membrane, allowing them to emit insulin.



PREVENTING REJECTION The body must also be kept from rejecting the cells. Current immunosuppressant drugs used in organ transplants are far too toxic for diabetics. Safer drugs must be developed.

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EARLY ONSET: Children born with diabetes face a lifetime of medical risks

legs may need to be amputated. The National Institutes of Health estimates that the U.S. spends at least \$100 billion a year on insulin and other diabetes treatments.

Transplanting the whole pancreas would seem to be the obvious solution, but the procedure is dangerous, difficult, and impractical, given that the insulin-producing islets make up only 10% of the organ's mass. Instead, surgeons have been working for some 20 years to retrieve only the so-called islets of Langerhans, islands of cells within the pancreas. But of the more than 300 such transplants made to date, the islets worked in

fewer than 35% of patients, and fewer than 10% stopped taking insulin.

The problem lies in the nature of the disease itself. In most organ transplants, surgeons swap a working part for a broken one. But in diabetes, the body insists on breaking the part over and



over, because the immune system attacks the new islet cells just as it did the old. In addition, immunosuppressant drugs such as cyclosporine and prednisone used in other organ transplants simply won't work for diabetics, whose own immune systems are already seri-

ously out of whack. The drug can cause such severe side effects, including life-threatening infections and cancer, that the cure is worse than the disease.

That's where Biogen's anti-CD3, used in the Florida monkeys, comes in. It is the most successful drug to date for controlling rejection without compromising the immune system. The antibody blocks receptors on white blood cells called T-cells, which kick-start certain parts of the immune reaction. "It's the first thing I've seen in 19 years of research that enables the islets to take up residence for a long time," says Kenyon.

T-CELL BLOCK. Some researchers and startups are trying to perfect a different way to keep islets alive, by wrapping the cells in a porous, biodegradable membrane. These tiny microcapsules would allow insulin and oxygen to pass back and forth through the pores to reach the islets, but block the larger T-cells. The microcapsules would be injected into a vein leading to the liver.

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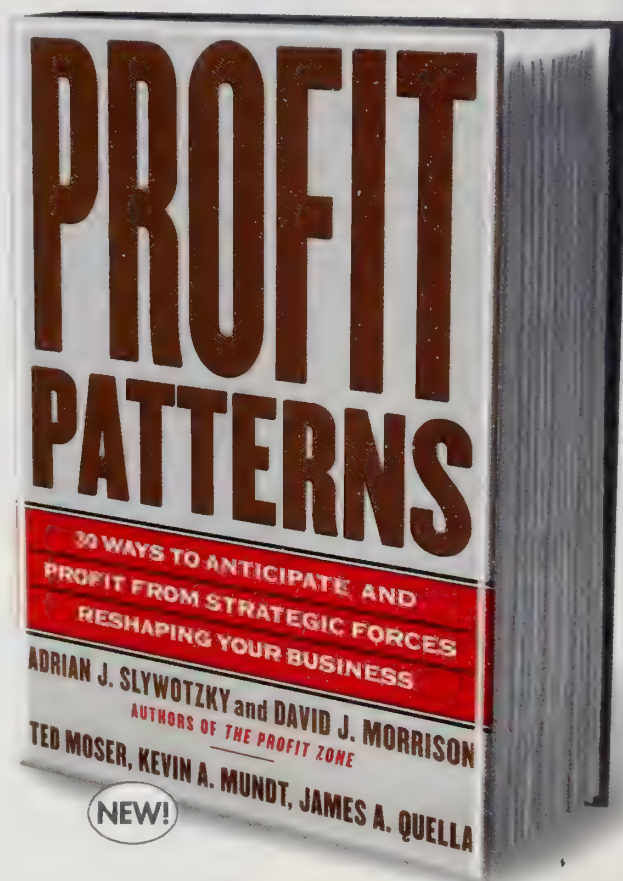
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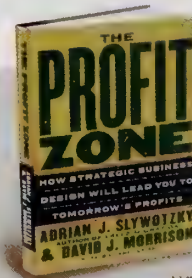
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The U.S. spends some \$100 billion a year on insulin and other treatments

it would solve the enormous problem of supply. With only 6,000 to 7,000 donors a year, there are nowhere near enough human islet cells available to meet demand. Encapsulation, though, uses the use of islets from pigs, which secrete a humanlike insulin.

Encapsulation is not a new idea. It was first tried in the early 1980s, but results to date have been disappointing. Blood vessels cannot easily penetrate the membranes to bring needed nutrients to the cells, and the pores can quickly clog up. "I think it's a good approach, but the progress has been pretty slow," says Robert Langer, a chemical engineering professor at Massachusetts Institute of Technology who pioneered the field of tissue engineering. "It's also a very expensive solution."

Indeed, it seems that the biggest problem for biotech startups working on encapsulation is lack of cash. The leading firms in the field—Novo, NovoRx, BioHybrid Technologies, and others—are all privately held, making

it harder to raise capital—and human trials using animal tissue are very costly. So far, only VivoRx Inc. of Santa Monica, Calif., has entered the first stage of clinical trials.

"HORSE RACE." While the encapsulation companies fiddle with pig cells, some researchers are rethinking human sources. Scientists at the Joslin Diabetes Center in Boston report they have been able to engineer pituitary cells to produce insulin at sufficient levels to cure diabetes in mice, while other scientists have had similar success with liver cells. And researchers at the Center for Islet Cell Transplantation may have discovered the precursor cells to islets, in the epithelial cells lining the pancreatic ducts. These precursors could theoretically be coaxed into growing into new islet cells, giving the body its own source of supply.

But this approach is also incredibly complicated. Even as researchers hone in on the genes that are encoded to produce insulin, there may be 100 oth-

ers that regulate production, an equally important function. Still, the cell-manipulation approach is beginning to attract as much interest as encapsulation. "Two years ago, I was convinced that animal islets would be the only real potential source of cells," says Center director Auchincloss. "But now I think it's a horse race. The analysis of genes that can make islets grow and differentiate could solve this problem long before animal tissue could be gotten to survive."

The horse race may look more like an ultra-marathon to diabetics desperate for a cure. No one knows this better than Dr. Kenyon, overseer of those Florida monkeys. Her seven-year-old daughter, Laura, was diagnosed with Type I diabetes while a baby, and went into a life-threatening coma when she was 14 months old. Although Kenyon is extremely cautious about any talk of a cure, even she admits to being "much more optimistic" than ever before.

By Catherine Arnst in New York

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STACKING SILICON TO MAKE SUPERFAST CHIPS

ON THE MIDWESTERN PLAINS, a new kind of high-rise metropolis is being built. But you have to look closely to see the silicon skyscrapers being developed at Purdue University in West Lafayette, Ind.

Modern chips already have several layers of circuitry, or wires, but all of their transistors are at ground level. Stacking those transistors vertically has long been a dream, says G. Dan Hutcheson, president of San Jose (Calif.) consultant VLSI Research Inc. Since chips keep getting bigger, "everyone knows we're going to run out of horizontal space at some point," he says.

Transistor towers promise not only smaller and thus cheaper chips but also better performance, says Gerold W. Neudeck, the electrical engineer heading the research. That's because the vertical connections between "floors" are just 0.1 micron long—a fraction of the distance between transistors spread out horizontally on a conventional chip's ground floor. So signals take much less time getting from place to place.

To build his silicon skyscrapers, Neudeck has cleverly tweaked several aspects of chipmaking technology, says a chip expert who follows Neudeck's work. One key: creating electrical barriers so that each new silicon layer grows only straight up, not over the surrounding silicon-dioxide insulation. As a result, Neudeck says, his process can eliminate several steps now required to keep the two materials separate.

Many wrinkles must be ironed out before the technology can go commercial, but it may not be long before chip designers become high-rise architects. *Otis Port*

THE CLEANEST CARS OF ALL GET CLOSER

HYDROGEN-BURNING CARS WOULD BE THE ULTIMATE in clean vehicles, with tailpipes that emit nothing but water. So far, though, the dream cars have barely gotten rolling. One of the biggest roadblocks, says John Stringer, a manager of materials research at the Electric Power Research Institute, is that liquid hydrogen—unlike gasoline—must be stored under pressure at low temperatures.

Now, physicist Jianyi Lin and a team at the National University of Singapore are enlisting the help of tiny graphite cylinders, just a few dozen atoms in diameter, known as carbon nanotubes. When laced with lithium and potassium, each tube can attract and hold a surprisingly large number of hydrogen atoms—at normal pressure. And the tubes can discharge and reabsorb the gas many times without a decrease in absorptive power, according to Lin's article in the July 2 issue of *Science*. While challenges remain, "this could be the big jump we've been waiting for," says Stringer. *Evelyn L. Wright*

A PIGSTY THAT DOESN'T STINK LIKE ONE

THERE'S SOMETHING MISSING at Keith Barefoot's 8,000-head hog farm near Raleigh, N.C.: the stench. "Our neighbors have to go somewhere else to learn what a hog farm smells like," he says. Why? Barefoot is one of a handful



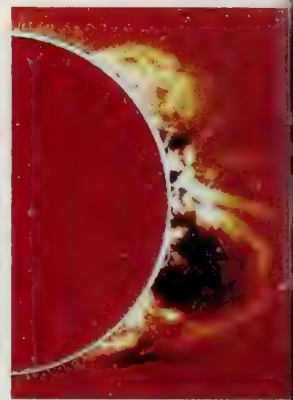
of farmers who have installed an innovative animal-waste-control system from Denver-based Bion Environmental Technologies Inc. Traditionally, pig and dairy farmers have pumped manure into sewage lagoons and sprayed nutrient-laden wastewater onto fields as fertilizer. But those methods not only smell awful, they have polluted nearby streams and rivers.

The Bion system tackles these problems by first flushing manure from barns with

water infused with high levels of bacteria. The bacteria bind with the smelly compounds, shutting off the odor, explains Bion co-founder Jere Northrop. The microbes rapidly begin breaking down the waste in an initial pond, dubbed a bioreactor. The waste is then pumped into another pond, which fills up with solids over a period of 4 to 12 months. Those solids create an odorless, soil-like fertilizer.

Finally, excess bacteria-laden liquid continues on to a third pond, which then is used to flush out the barns again, completing the cycle. "I have been amazed," says Evan Jones, emeritus professor of animal science and biochemistry at North Carolina State University in Raleigh, who has looked at the system. "It is an awfully good solution."

Scientists and engineers are tackling the problem from the other end as well. Pioneer Hi-Bred International is developing feed corn that would produce less polluting manure. And biologists are working on genetically engineered pigs that would do the same. *John Carey*



WARNING UTILITIES WHEN SUN STORMS TURN THREATENING

AN 11-YEAR CYCLE OF solar activity has begun, heralding disruptive geomagnetic disturbances on earth. In past cycles, storms on the sun's surface have wreaked havoc with communications satellites and power grids. Help is at hand, thanks to a team effort by Metatech Applied Power Solutions, Duluth, Minn., and the Electric Power Research Institute. Using NASA satellite data provided by the National Oceanic & Atmospheric Administration, Metatech and EPRI can alert utilities when the first waves of charged particles reach earth after being hurled into space by solar phenomena known as "coronal mass ejection."

Metatech's system sounds alarms before the solar particles begin to disrupt earth's magnetic field, thus reducing swirling electrical currents that can knock out regional power grids. Such events aren't trivial. A geomagnetic storm in March 1989, brought down Hydro-Quebec's power-transmission system, leaving 6 million people without electricity for nine hours. The new alerts will give utilities up to 45 minutes warning—enough time to begin stockpiling energy and switch off the most sensitive equipment.

NET GAIN OR GATEWAY?

plan: Become newbies' first choice for PC financing, training, and Internet service



MORE IN STORE

Gateway Country has become a growth engine, expected to generate \$2 billion in sales in 1999

quiring ISP, portal, or Web-site customers is slashed because the work is being done by the PC sale. Louis J. Mazzucchelli Jr. of Gerard Klauer Mattison & Co. estimates the cost of selling to a repeat customer is 7 to 10 times lower than acquiring a new buyer. Gaining converts is important for Gateway since it is the PC maker most dependent on consumers and small businesses, where subsidies from ISPs have the most appeal.

EARLY SHIFT. The glue to the strategy is gateway.net, an Internet-access service Gateway has offered for the past two years. After luring only 200,000 customers, Waitt decided to start giving away ISP service for one year to anyone buying a Gateway PC costing over \$999. More than one-third of Gateway PC buyers now sign up for gateway.net, which has 400,000 subscribers.

That's not nearly enough for Waitt. According to investment bankers, Gateway is considering buying EarthLink Network Inc., a Pasadena (Calif.) ISP with 1.2 million subscribers. Waitt confirms he has had talks with EarthLink, as well as with AOL and Microsoft Network. But he says only that "what we're looking at is whether we do it ourselves or partner." Analysts say Earthlink, which would probably cost more than \$2 billion and dilute Gateway's earnings, is too pricey. "Two billion is ridiculous," says

ever since he founded Gateway in an Iowa farmhouse 14 years ago, Chairman and CEO Theodore W. Waitt has fought a relentless battle against plummeting PC prices and big competitors like IBM, Dell, and Compaq. But those challenges may wind up being like mere fistfights. As the Internet explodes, Waitt is facing even fiercer foes: Internet service providers, from pesky startups to America Online, whose steroidal stock valuations tempt them to offer PCs free in exchange for customers. "The valuations that Wall Street is putting on Net companies lets them develop a business model that's not just making money but that's about to blow up," complains Waitt.

The ponytailed, 36-year-old Waitt's loss is offset by falling profits on PCs by retooling San Diego-based Gateway Inc. into a powerhouse Internet-services company that happens to sell computers as well. If he succeeds, within two or three years, Waitt's \$9 billion Gateway will decrease as much as 30% of its revenue, and nearly half of its profits, from a prolonged services strategy. One of the consulting and training of-fered through a chain of brick-and-

mortar stores; the other will be E-commerce services through Gateway's own ISP. It's a play that may determine if PC makers or ISPs rule in a world that cares more about the Net than about chip speeds and gigabyte storage.

At the core of Waitt's strategy is a simple idea: grab customers early on and keep them generating incremental revenue through a variety of services. The relationship starts with the purchase of a PC, which Gateway is thinking of subsidizing, just like AOL and Microsoft Network are doing. Then Gateway wants to lock in those customers through financing, Internet access, and a personalized portal that will steer them to Gateway's E-commerce sites. That way, the cost of ac-



MOVING FAST: Gateway's spotted-cow motif will soon grace 1,000 retail stores

Mazzucchelli. Still, analysts concede Gateway will need to acquire or form alliances with an ISP. If it doesn't, it will lose market share to deeper-pocketed rivals.

Of course, the big dollars can be earned after the PC is plugged into the Net. That's why Gateway began offering customized home pages in conjunction with Yahoo! Inc. earlier this year. When a sale is being completed, Gateway reps ask customers for information that will make the home pages relevant to them for news, personal finance, and shopping. In February, Gateway invested \$21 million for a 19% stake in NECX Direct, a privately held E-commerce company based in Peabody, Mass. Together, they run SpotShop.com, which sells 30,000 hardware and software items. Gateway also has registered such Web addresses as spotgames.com, travelinfospot.com, and spottedu.com. "When we deliver a PC, we want you to be registered on the Net, with software loaded and a personalized

Web site—a \$1,000 Micron Millennia.

Waitt has other problems, too. Gateway.net has the potential to grow fast, since about 33% of customers take the service, and analysts expect Gateway to sell some 4.7 million units this year. So analysts figure Gateway will double its ISP customers, to 800,000, by yearend. Yet the company remains far behind titans AOL, with 17 million subscribers, and Microsoft Network, with 2 million.

Gateway has confounded doubters before. In 1996, Waitt began opening retail Gateway Country stores. Analysts feared the roomy outlets would be a balance-

GATEWAY'S BID TO OWN THE CUSTOMER

STEP ONE Nab PC buyers through telemarketing, online sales, and a national network of 169 showrooms called Gateway Country stores. These stores, which will double to about 400 over the next few years, let newbies and small business owners get their hands on PCs and surf the Web before they buy. To make buying easier and boost profits, Gateway offers financing as well as training courses, which average \$75 for a three-hour session. Because customers can order PCs at online kiosks in the Country stores, Gateway stocks no inventory.

STEP TWO Help Gateway's PC buyers get online. About 400,000 have already subscribed to gateway.net, a service started in 1997. Gateway bundles a year's worth of service free to buyers, an option taken by more than one-third of Gateway customers. After that, customers pay \$17.95 a month. Gateway is in talks to acquire Internet access provider EarthLink, which would expand monthly service fees and swell subscribers by 1.2 million.

STEP THREE Generate E-commerce revenues. To keep customers coming back, Gateway offers a customized home page created in partnership with portal Yahoo! It also offers subscribers 30,000 hardware and software items at online store SpotShop.com, run with NECX Direct. Gateway paid \$21 million in February for a 19% stake.

sheet burden. Instead, Gateway says in-store cost of sales is no greater over the phone, in large measure because online sales through kiosks in stores erase the need for inventory. Country stores, in fact, have turned to be Gateway's fastest source of growth, generating an expected \$2 billion in sales this year, or about 25% of the company's total. Gateway plans to double number of outlets, to 400, over the next few years. To let locals know a store is open, a vw Beetle with Gateway's cow-motif cruises the streets.

HANDS-ON. The stores are emerging as the foundation for Gateway's effort to help small businesses configure and install PC networks. Says Bruce Short, a small business exec dickering over a contract for 10 networked PCs in Gateway's Orange (Calif.) store: "I don't feel comfortable unless I can sit down and see what you are talking to."

The Country stores also are a way to appeal to first-time PC buyers, who, along with small businesses, are Gateway's main customers. Hard-pressed to pay for a new machine? Gateway lets buyers lease a machine in monthly installments as low as \$19 a month over two years. When the time's up, buyers can keep the machine or get trade-in value toward a new model. This year Gateway expects to write about \$2 billion in notes, double last year's level. Training is an even more lucrative option. By yearend, Gateway's Country stores will have classrooms with 4,000 seats, offering beginning to advanced classes that start at \$75 for three hours.

Waitt's moves already are offsetting competition in PCs. If Gateway only sells PCs, the 14% fall in average selling price to \$1,938 in the first quarter, which ended Mar. 31, would have hit gross margins proportionately. Instead, says analyst Michael K. Kwatinetz of Credit Suisse First Boston, margins from financing and Internet offerings offset this decline by 10 points. Indeed, gross margins in the first quarter rose to 21.4% from 19.5% a year earlier. That could grow. By 2003, Gateway reckons, Internet services, online advertising, E-commerce, Net access, and consumer software will generate \$1.1 billion in industrywide revenues, vs. \$1 billion in PC sales.

If Gateway can carve out even a small share of that, the trend toward cheaper PCs will be manageable. And Waitt will be seen as having been prescient 14 years ago for giving his computer company a name that fits nicely with its new, Net-centered business.

By Steven V. Brull in Los Angeles



WAITT: Offering financing that lets buyers pay as little as \$19 a month

portal for news, weather, and stocks," says Jeffrey Waitt, Gateway's president and COO.

CROWDED FIELD. Waitt has a jump on other PC rivals—but not for long. Since Gateway became the first PC maker to offer Internet access in 1997, Compaq Computer, Hewlett-Packard, and Micron have followed suit. Now, Dell is set to start a similar ISP service, which also will be bundled in with a PC purchase. "You'll see us offer ISP service" in the next 60 to 90 days in the U.S., confirms CEO Michael S. Dell. Meanwhile, Hewlett-Packard soon will announce a deal with a major ISP that will provide a \$400 rebate on all HP Pavilion PCs. And on July 12, Micron Electronics will give customers who buy its Premium \$1,100 Internet package—three years of ISP service, online classes at its Micron University, and access to deals on software and peripherals purchased at its

IT'S STARTING TO FEEL LIKE THE YEAR OF THE DUCK.



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*Barron's 3/15/99 "Annual Survey of On-line Brokers". MONEY magazine, June 1999. "The Best On-line Brokers". **If, for any reason, you are not satisfied with the service you receive from National Discount Brokers, we will rebate your transaction fee up to \$27.95. Simply notify us within seven business days of the transaction and you will receive your money back. NDB has a relationship with independent research and market data vendors. Securities, products and services are offered through NDB. NDB is a member NASD, SIPC, MSRB and Discount Brokers Association. NDB does not provide tax, legal or investment advice. NDB is a National Discount Brokers Group Company. Barron's is a registered trademark of Dow Jones & Company, Inc.

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NATIONAL DISCOUNT BROKERS
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THE FREE-PC GAME: LURE 'EM IN AND LOCK 'EM UP

Get gobs of stuff free. That has long been the promise of the Internet: free news, free E-mail, free music. Now, a handful of leading Internet service providers are taking offers of free stuff to a new level. Sign up with Prodigy, Microsoft Network, or America Online's CompuServe service and you'll get a free PC or \$400 off the cost of one.

There are plenty of catches. And it's no coincidence that the fine print

reads just like that of advertisements for cellular phones, with talk of service contracts and early-termination penalties. Typically, the deals offer a \$400 rebate and require users to sign on for a three-year Internet-service contract for \$20 a month and up. Want a monitor with that free computer? That'll be at least \$100 more. And you'll have to pick up the difference for such extras as more memory or better speakers.

NABBING NEWBIES. Still, the deals make sense for many consumers. For starters, "free" PCs pretty much remove the final barrier to entry for first-time buyers—price. And shoppers who want a second PC will likely be willing to switch ISPs to get one for free. "We think this model—the cell-phone model—will represent the way most PCs get sold at retail," says Stephen A. Dukker, CEO of emachines Inc. in Irvine, Calif., a discounter that now ranks fifth among PC sellers in the consumer market after only 10 months in business.

The losers will be smaller ISPs and traditional PC makers. "This will push the ISPs' cost of acquisition up and bring hardware prices down," says analyst Youssef Squali of investment banker Ladenburg Thalmann &

Co. ISPs such as EarthLink Network Inc. and MindSpring Enterprises Inc. will be forced to link up with mass merchandisers to match the promotions—or be shut out of the competition for Net newbies. EarthLink is already reacting—it plans to offer \$400 rebates shortly. "I'm not overly enthused about getting into it, but we will do it to stay competitive," says CFO Grayson L. Hoberg.

The entry of big ISPs into the discount movement also will put pressure on the free-PC pioneers—tiny companies such as Gobi and Intersquid.com. They ship no-brand systems to customers who sign up for service at monthly fees of \$27 and up. Free-PC Inc., which offers free PCs with free Internet service to members who are willing to divulge personal information and watch a constant bar-

rage of advertising, professes not to be worried. "We're free and they're not," says Marketing Vice-President Steve Chadima. So far, though, Free-PC has shipped only 10,000 computers to its 1.2 million applicants.

LONG VIEW. Established computer makers, such as Compaq, Hewlett-Packard, and IBM, also stand to lose. Already shaken by the free-fall in PC prices, these companies have responded by holding the line as much as possible on price and throwing in a freebie or two. A popular one has been a year's free Internet service, which adds to computer makers' costs. While the \$400 rebates that AOL and Prodigy offer through the likes of Circuit City Stores Inc. apply to any brand in the store, the nature of the deal only serves to highlight the price difference: In retailers' newspaper ads,

only the sub-\$400 models are spotlighted with the word "free" in giant letters.

To AOL and Prodigy, the rebate offers make good business sense. "Our retention rate will be higher, so we expect that our marketing expenses as a percent of revenue will go down," says Audrey Weil, senior vice-president of AOL and general manager of CompuServe. She says the \$21.95 Internet-service monthly fee is higher than the \$9.95 the majority of

CompuServe subscribers pay and that the higher usage the company expects from these new subscribers will lead to more ad and commerce revenue.

The ISPs are hoping to spur the sale of PCs to families who have never owned

one and lock in new business for their service. But the deals are likely to send PC and Internet-access prices to new lows, making the free-PC business a free-for-all.

By Larry Armstrong in Los Angeles



Psst...Wanna Free PC?

SERVICE	PARTNER	DEAL
AOL'S COMPUSEVER	emachines	\$400 off an emachine at any retailer with a 3-year contract at \$29.95/month
AOL'S COMPUSEVER	Circuit City	\$400 off any PC with a 3-year contract at \$21.95/month
PRODIGY	BestBuy	\$400 off any computer with a 3-year contract at \$19.95/month
MSN	Staples	\$400 off any computer with a 3-year contract at \$19.95/month

Monitors not included DATA: AMERICA ONLINE INC., PRODIGY INC., MICROSOFT NETWORK

READ THE FINE PRINT: Ads for "free" PCs read like the ones for cell phones, with plenty of hitches





**When powering
your Net, keep in mind that our servers
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You grow. Your needs grow. Suddenly, your servers seem a little lacking in the skills department. Buying more could just lead to manageability issues that make things worse. Well, maybe what you need isn't more servers, but servers that do more. Enter Sun. With a complete line of spunky workgroup, mid-range and high-end servers, we offer power galore and scalability at every level. Our mighty Starfire™ has mainframe-class domain partitioning to manage independent jobs and tasks. It is also scalable to 64 processors and has 60 TB of storage. And since all of our servers run on our Solaris™ Operating Environment, performance and growth will never be restrained. In the end, you buy less hardware, use less space, have less stuff to manage and — oh, yeah — save money, too. If this all seems to make those other servers look a little weak in the talent department, well, that's purely intentional. For help with server consolidation, planning, implementation and training, call us at 800-SUN-FIND or visit www.sun.com.
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FIDELITY.COM GETS SERIOUS

It amasses a big war chest to battle online brokerages

Fidelity Investments rarely makes big strategic mistakes. But in May, 1996, the company's brokerage unit was caught napping when archrival Charles Schwab & Co. launched Internet-based stock trading. Fidelity didn't offer a Net service until January, 1997, and it has paid dearly for being late. Schwab, which ran in lockstep with Fidelity as the nation's two top discount brokers for nearly two decades, has now captured 27.5% of the online trading market. Fidelity is in fifth place, with 9.3%, trailing upstarts like E*Trade Group Inc. and Datek Online Holding Corp. (table).

CRUCIAL TEST. But Fidelity is gearing up for a renewed assault on the Internet. On June 17, the privately held firm

Led by 69-year-old Chairman Edward C. "Ned" Johnson III, the firm has been an innovator in the financial world, creating such things as 24-hour phone service and sector-specific mutual funds. But lightning changes brought by the Internet have left it scrambling to catch up, and competitors are rapidly mobilizing. Merrill Lynch & Co. recently announced plans to offer Internet trading at prices competitive with Fidelity and Schwab, both of which charge \$29.95 per trade. And Internet-only powerhouses, such as E*Trade and Intuit, are moving much more aggressively than Fidelity in areas that may be critical for attracting online investors in the future, such as Internet banking.

To be sure, Fidelity has plenty of cus-



raised \$1 billion in a bond offering, providing a war chest that will be used in part to fund new initiatives online. And Fidelity is planning a slew of new online services aimed at regaining ground lost to Schwab and others, including a Web site for active traders and new services for Fidelity's 6 million customers with 401(k) accounts. "Second doesn't work—we want to be first," says Robert P. Mazzarella, president of Fidelity Brokerage Services Inc.

Fidelity's Internet strategy is a crucial test for the Boston giant, which manages \$856 billion in mutual funds.

tomers, but they tend to be the cautious, buy-and-hold sorts. So Fidelity is rolling out new online tools in hopes of wooing active traders—which the firm defines as those making at least 36 trades per year. These investors account for less than 3% of Fidelity's 2.3 million online customers, even though Fidelity charges them only \$14.95 per trade. More important, these are the type of customers who are fueling the growth of online brokers like E*Trade and Datek, and Fidelity would like to have more of them.

Its new active trader site, to be rolled out later this month, combines extensive investment information with a pop-up trading window accessible from a single screen. In addition to constantly

Fidelity is upgrading its site for active traders. But its trading costs are higher than many rivals'

ONLINE BROKERAGE'S TRACEY CURVEY

an added service that will be attractive to active traders," says Tracey Curvey, executive vice-president of online brokerage and daughter-in-law of Fidelity President James C. Curvey. Fidelity's \$14.95 trades are still sharply higher than many firms that woo day traders. Fidelity also hopes to draw a much larger number of online customers by rolling out new services for its 401(k) investors. Later this month, those who have a Fidelity 401(k) plan will be able to access their retirement accounts online through a Fidelity brokerage account. That will make it easier for retirement customers to keep tabs on a larger swath of their family finances.

At the same time, Fidelity also plans to launch Portfolio Investment Review, which reports on investment returns





FIDELITY'S INTERNET CENTER IN NEW HAMPSHIRE

Fidelity's Online Challenge

NO. 2 IN CLIENT ASSETS...

	ASSETS BILLIONS OF DOLLARS
SCHWAB	\$219.0
FIDELITY	160.0
WATERHOUSE	38.8
DATEK	21.1
AMERITRADE	19.5
DIJDIRECT	11.2
DATEK	5.5
OTHERS	34.0

CREDIT SUISSE FIRST BOSTON, U.S. BANCORP PIPER JAFFRAY INC.

...AND IN NUMBER OF CUSTOMERS...

	ACCOUNTS THOUSANDS
SCHWAB	2,500
FIDELITY	2,300
E*TRADE	909
WATERHOUSE	615
DIJDIRECT	590
AMERITRADE	428
DATEK	205
OTHERS	552

...BUT LAGS IN TRADING

	MARKET SHARE*
SCHWAB	27.5%
E*TRADE	12.9
WATERHOUSE	11.6
DATEK	10.0
FIDELITY	9.3
AMERITRADE	8.4
DIJDIRECT	3.6
OTHERS	21.4

*AVERAGE DAILY TRADES, FIRST QUARTER, 1999

analyzes the composition of portfolios, allows investors to test how different types of holdings might affect long-term performance. Curvey claims the portfolio review will be the most sophisticated analytical tool offered by any of the online brokers.

Fidelity executives hope their new efforts will win their online brokerage the long overdue recognition. Mazzella is frustrated that Fidelity's online innovations have gone unnoticed. He says it was first with pager access to trading, online bill payment, and the ability to distribute initial public offerings to retail customers. "One of the challenges we have is that we're not followed as much as E*Trade and Schwab," he gripes. That's because those two are closely watched public companies while Fidelity is private.

Despite Fidelity's innovations, most analysts who track online brokers say that in building its online business, Fidelity has lagged behind Schwab. Just as Schwab has built its Web site around a heavy dose of investment advice and information, Fidelity has followed suit. But while Fidelity and other brokers play a constant game of one-upmanship in offering new features and services on their Web sites, Schwab has always come out on top. "Fidelity has been following the leader, and Schwab has just done a better job of providing an easy-to-use Web site," says Daniel Burke, senior brokerage analyst at Gomez.com, an online rating site.

Curvey responds that Fidelity received the top rating among online brokers in an investor survey earlier this year by Forrester Research. And she

adds that Fidelity is spending heavily—she won't say how much—toward improving its Web site and "personalizing" its features to meet the needs of different types of investors through a wide range of information and services that can be accessed online. "We have our act together," she says.

LOYAL CUSTOMERS. Fidelity also has a trump card that significantly boosts its chances of being a top online broker: its customer base of 15 million fund investors. "That is without a doubt our most valuable asset" that the online unit can mine customers from for years, says Curvey. She estimates about half of Fidelity's 2-million-plus online customers have come from the fund side of the company. Indeed, in assets and accounts, Fidelity is second only to Schwab.

Fidelity executives say they are not eager to move too rapidly online if it results in the kind of service problems or computer outages that have plagued some competitors. Fidelity has so far avoided the service blackouts that have dogged many in the industry.

Even if Schwab continues to trump Fidelity, it may not matter much, says Daniel W. Latimore, director of financial-services industry research at Mainspring Communications Inc., an Internet consulting firm in Cambridge, Mass. "Fidelity is an established industry leader, and their real challenge isn't to expand but to make sure that their customers don't defect." If Fidelity proves to be a Net innovator rather than follower, new customers might even sign on.

By Geoffrey Smith in Boston

E-COMMERCE

THE BATTLE TO BE YOUR ONLINE BILL COLLECTOR

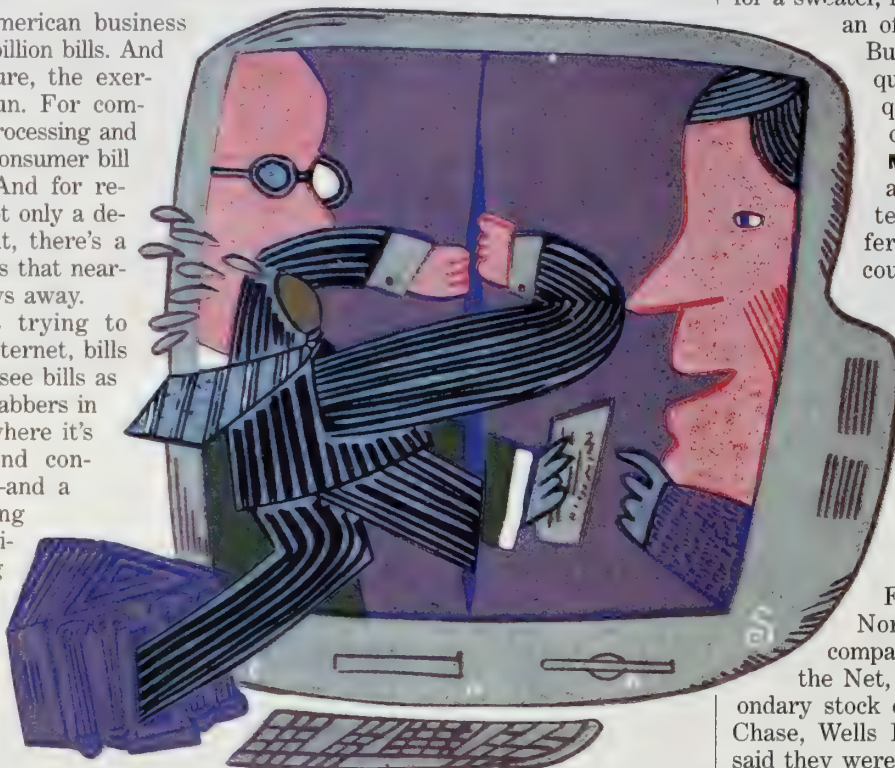
Bankers hope cyberbilling can give them a toehold on the Net

Every year, American business sends out 29 billion bills. And by any measure, the exercise isn't much fun. For companies, printing, processing and posting a typical consumer bill runs about 90¢. And for recipients, there's not only a demand for payment, there's a wad of solicitations that nearly everyone throws away.

But for banks trying to make it on the Internet, bills are cool. Bankers see bills as surefire eyeball-grabbers in an environment where it's tough to command consumer attention—and a key to protecting their existing business managing cash for big companies. Increasingly, banks are battling high-tech competitors for control of Internet billing, or electronic-bill presentment, as it is called.

To be sure, this is a fight over a business that is in its infancy. Few bills are now sent via the Net, and online payment systems often involve a paper check. But the technology exists to send bills from businesses to customers and route payments back on the Net. By the end of next year, industry analysts estimate upwards of 4.5 million households will be receiving bills online. What's more, sending and handling bills over the Net should be about 40% cheaper than paper delivery, says the Gartner Group, a research firm in Stamford, Conn.

SLOW TO ACT. The question is who will become the bill collector on the Net. Bankers reckon that if they can turn their Web sites into mailboxes for electronic bills, they can become key entry points on the Net—portals, even. That would enable them to sell other financial services online. The fear is that existing portals, such as Yahoo! or even America



Banks fear that portals such as Yahoo! will become the payment centers

Online, will become centers of bill payment and, in turn, siphon off existing bank businesses. "Banks have been slow to get into this," says Kenneth J. Kerr, a Gartner analyst in Durham, N.C. "But they realize there is a threat here and they need to get aboard."

Banks have their advantages. They can offer customers simultaneous access to their bills and their money. Banks have long relationships with billers, such as utilities and retailers, and centuries of experience in protecting people's money. "Payments are our core business and we are not yielding this space to any-

one," says Joseph G. Sponholz, Citi Manhattan Corp. vice-chairman.

The obvious appeal of Internet billing is the contact it offers with consumers. "Mass adoption of electronic bill presentment represents a billion-dollar advertising opportunity," says Neil Lustig, director of electronic-commerce solutions at IBM, an active player in online billing. Lustig predicts Internet billing will be tailored to the customer. A bill for a sweater, for instance, could include

an offer for matching socks. But doing this right will require marketing savvy and quality few banks have demonstrated.

MUSCLING IN. Big banks also are worried that technology companies offering bill presentment could muscle into one of their fastest-growing businesses—managing cash for big companies. After all, collecting bills is a close cousin to cash management.

Last month, the battle over Net billing took a bruising turn. Chase Free Holdings Corp., Norcross (Ga.)-based company that delivers bills to the Net, wound up pulling a secondary stock offer after a coalition of Chase, Wells Fargo, and First Union said they were forming a venture—Exchange—to route bills to their customers. Investors saw a challenge to CheckFree, and the company paid dearly. On June 21, CheckFree had sold 10 million shares to investors at \$39 each. But by June 23, CheckFree's shares plunged to \$28.75. The company canceled the sale the next day.

Exchange officials said the timing of their announcement was coincidental. But CheckFree's chairman and chief executive, Peter J. Kight, said Chase, which is still a CheckFree customer, had been upset with his company's efforts to offer bills through Net portals. "Chase didn't want us to do it," he said.

At this point, predicting how the industry will shake out is premature. Banks and technology companies already have formed several alliances aimed at delivering bills on the Net. More combinations are likely. What's clear, though, is the banks know they are running out of time to get their Internet billing together.

By Gary Silverman in New York

FROM PONY EXPRESS TO INTERNET EXPRESS:

HOW CLICK2SENDTM BRINGS SPEED AND SECURITY TO INTERNET DOCUMENT DELIVERY

The U.S. Postal Service succeeds today in delivering more than 99.9% of mail to its intended destination—on time and intact. That's a far cry from the old Pony Express, where routes were so dangerous that riders had to arm themselves with knives and Colt revolvers. Says the historian William H. Floyd, "For each heroic rider, [there was] an equally heroic martyr."

Needless to say, much of the mail did not get through on time... if at all.

Electronic mail is in a similar state of evolution. Although bandits are not waiting at every digital turn to nab the bits and bytes of electronic transmissions, a distressingly large share of documents transmitted digitally reaches recipients corrupted, or unreadable (either the files cannot be opened or they require an extra plug-in). In addition, large documents like corporate reports and PowerPoint presentations can strain company intranets—a problem particularly acute for mobile executives using notebook computers and low-bandwidth connections—causing logjams and forcing administrators to arbitrarily limit the size of e-mail attachments.

CLICK... TO SEND

The Mountain View, Calif.-based company click2send has developed an electronic file delivery service which is designed to resolve these problems by providing easy, reliable, and highly secure document delivery directly over the Internet. "Our goal," says click2send co-founder and CEO Charlene Steele Vaughn, "is

to make it as simple to send or receive a large electronic document as it is to place a telephone call." And with click2send's encryption it will be great for all those confidential documents and contracts.

Few developments, it seems, could be more important to the smooth flow of business in the 21st century. Intelliquist, a leading market research firm, projects that 31% of the worldwide document delivery business will move to the Internet by 2001, creating a \$3 billion market for online document and file transfer—not to mention the time and manpower savings.

The click2send team aims to capture first-mover advantage in a market that, with these economics, is certain to become intensely competitive. Among the service's distinctions, says Vaughn, is the fact that the free click2send service "allows business users to send digital files of all types and sizes—safeguarded by ironclad network security."

Moreover, file sending and opening are one-click operations, with no need for proprietary software, expensive client licenses, or user training.

THE CLICK2SEND SAFE DEPOSIT BOXTM

click2send's Web-based delivery service is built around the concept of a secure "click2send safe deposit box" (CSDB)—a digital version of the physical safe deposit boxes that have been used by banks and other financial institutions for decades. The CSDB is just as easy to use: it appears as a very user-friendly version of a computer's filing system—residing not on the user's computer, but in cyberspace.



Charlene Steele Vaughn
President and CEO of
click2send.com, Inc (left)
David Knight
CTO of click2send.com, Inc (right)

(Continued)

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To send a file, users first "deposit" the file into their personal CSDB (a user can own up to five CSDBs at once), and writes an e-mail message to the desired recipients that contains a Web-based "pointer" to the user's CSDB. Subsequently, when a recipient retrieves the message, he or she need only click on the file name and the file can be either opened automatically or delivered onto their computer's hard drive.

The click2send service permits users to store up to 120 MB in files in each CSDB, for up to 10 days at a time. That would be the equivalent of about 800 floppies. This allows the service to be employed by business travelers or by those wishing to collaborate over the Internet with any number of other users. It's also possible for multiple users to view the same document while logging on to the click2send service from different geographic locations whether in the next building or around the world.

Further, because file delivery and storage for mission-critical business applications demands the utmost in security, click2send protects all its files with VeriSign's industry-leading encryption technology, with each CSDB secured by a deposit key (password) known only to its owner. The use of such technologies "ensures that files cannot be altered or intercepted," notes Anil Pereira, vice-president of VeriSign's Internet Services Group, making the click2send service fundamentally more secure than competing file delivery systems.

A NETWORKING PARTNER

Even before click2send's launch this spring, executives in companies like Mattel Toys, Warner Brothers, and Lucent Technologies had signed on as initial subscribers. But one of the company's most significant partnerships to date is a corporate alliance announced in late April with networking leader Cisco Systems of San Jose, Calif.

Cisco chose click2send as a key member of its new hosted application initiative, intended to connect small- and medium-size businesses to

mission-critical applications hosted by Cisco and its partners. "Small- and medium-size businesses no longer need to spend time and money on costly infrastructure investments" like large data and media servers and high-bandwidth pipes, explains Eugene Lee, Cisco vice-president of small/medium business marketing, enabling them to "realize the benefit of using Web-based business applications" without having to incur the often hefty overhead costs.

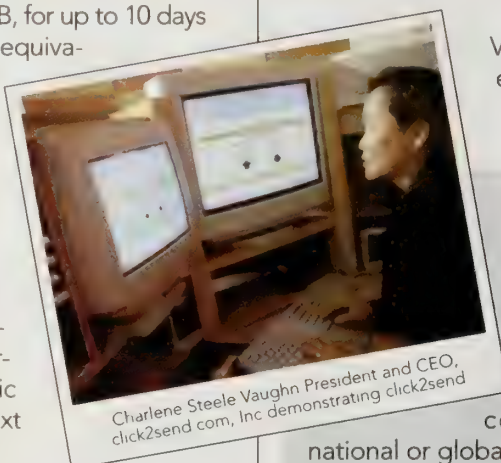
The result, says click2send's Vaughn, is "dramatically enhanced efficiency at a time when small- and medium-sized businesses need it most."

FOCUSING ON BUSINESS VALUE

Indeed, she notes, technological innovations like notebook computing and the internet "have made it possible for smaller companies to develop a national or global presence at a fraction of traditional brick-and-mortar costs." Still, certain technical infrastructure costs are irreducible.

"Security, performance, and high availability demand the best in networking capabilities," says Vaughn. "The click2send service, built on the world-class networking infrastructure of companies like Cisco and [hosting partner] AboveNet, allows growing companies to take maximum advantage of these opportunities by focusing on the core value of their business, not on the technology required to run it."

And that, she emphasizes, is one vital reason for quickly turning the Pony Express of current digital file delivery into the fast, secure document delivery service that businesses in the new "connected century" will demand.



Charlene Steele Vaughn President and CEO, click2send.com, Inc demonstrating click2send

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ALMAKERS

AN WIT OUTWIT THE COMPETITION?

online investment bank now faces a host of copycat rivals

With the market again rewarding Internet initial public offerings, Wit Capital Group (WITC) counts a stock and a half. That's because which pioneered online distribution of stock offerings, is not only an Internet IPO but also a play on the broader market for new Internet-related issues. The stock, which was priced at \$9 on June 4, limped along for a couple of days and then rocketed to a high of \$31, settling down to 31% on July 6. But Wit faces challenges. While its stock has been heating up, so has competition from new online investment banks such as E*Offering, W.R. Hambrecht, and Wedbush Morgan Securities. E InvestmentBank. There's also competition from other investment banks that distribute IPOs through their online brokerage arms, such as Donaldson, Lufkin & Jenrette Inc., which offers IPO shares to large account holders at DLJdirect Inc. Also, Wit's strategy is to focus on Internet-related issues, so it could be doubly hurt by a lull in that volatile sector. So why the stellar stock performance? Analysts from Bear, Stearns & Co. and Thomas Weisel Partners—two firms that helped bring Wit public—issued recommendations on June 29, the day Wit came out of its quiet period.

Wit also got a boost from a string of successful recent IPOs. Most notable, Wit was co-manager for Juniper Networks Inc. (JNPR), which began trading on June 24 at \$34 and closed on July 6 at 139%.

As one of the underwriters, Wit profits from each IPO, although the firm won't disclose its percentage and says fees vary depending on the deal. But because Wit doesn't act as lead underwriter—ceding that to such firms as Bear Stearns—it does not pocket the big underwriting bucks. "Our model is to handle the online retail distribution for those deals," says Susan Berkowitz, Wit's senior vice-president for marketing.

This year alone, Wit has participated in 54 public offerings—more than the 39 it did in all of 1998 and 1997. For the first quarter of 1999, its revenues were \$3.9 million vs. \$2 million for all of 1998. But its losses are also growing. The net loss for this year's first quarter was \$4.9 million. For all of 1998, Wit lost \$8.8 million.

Online distribution of IPO shares to

average investors has been a bumpy road for Wit. In May, after investors complained about Wit's first-come, first-served method, it created a window of several hours in which all share requests are weighted equally. If an issue becomes oversubscribed during that period, Wit uses a lottery system. Wit's goal, says Berkowitz, is to make the process "fair and equitable" for investors.

Wit has some of Wall Street's big guns on board. Chairman and Co-CEO Robert H.

Lessin was previously vice-chairman at Salomon Smith Barney, while the other Co-CEO and President, Ronald W. Readmond, was vice-chairman at Charles Schwab & Co. The Director of investment banking, Mark Loehr, had been head of equity capital markets at Salomon Smith Barney. And Goldman, Sachs & Co. bought a 22% stake in Wit in a deal announced on Mar. 29. Post-IPO, it owns about 13%. "Wit Capital has a wonderful stable of talent," says David Menlow, president of IPO Financial Network.

ROOM FOR MORE. But Wit's competition also has talent. E*Offering, which has a deal to distribute its IPOs to E*Trade (EGRP) customers, is run by Walter W. Cruttenden III, founder of investment bank Cruttenden Roth Inc. W.R. Ham-

brecht & Co. was launched by the co-founder of Hambrecht & Quist. It offers OpenIPO, which uses an auction process to sell shares.

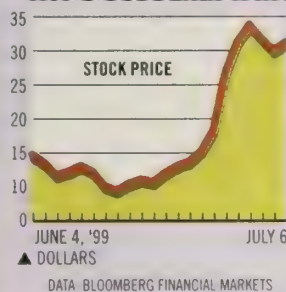
DLJ recently began competing with Wit on Internet IPO underwriting through its DLJdirect subsidiary. "I think there will be many rivals from top-tier investment banks, but

there is room for several players," says Brad Sinrod, president of IPO.com Inc., which provides free IPO information.

Wit should be fortified by the \$79 million it raised in its IPO, making possible acquisitions and strategic deals. But in order to prevail in the fast-growing online investment banking arena, Wit will have to use all of its wits.

By Amey Stone, with Marcia Vickers in New York

WIT'S SUDDENLY A HIT



HEDGE FUNDS

THE STOCK WHIZ YOU NEVER HEARD OF

Low-key Joe DiMenna scores big gains at Zweig-DiMenna



DIMENNA: Last year he earned more than \$50 million at his hedge fund

On Wall Street, where name recognition is half the sizzle and people are tripping over themselves to get on TV, Joseph A. DiMenna, co-founder of the Zweig-DiMenna partnerships—the fifth-largest hedge fund—is about as low-key as you can get.

“Joe DiMenna is the best stock-picker no one has ever heard of,” says Steve Taub, editor of the Individual Investor Online who ran *Financial World’s* annual ranking of Wall Street’s highest-paid money managers for 12 years. In 1998, for instance, DiMenna was near the top, earning more than \$50 million, according to Taub.

LEAN TEAM. DiMenna’s better-known half is Martin E. Zweig, the market strategist for the hedge fund. Zweig, who sold his mutual fund company last year, remains a regular on the popular TV show *Wall Street Week*. But it is the

more publicity-shy DiMenna who almost single-handedly calls the shots on trades worth tens of millions of dollars each day for the \$4 billion portfolio. DiMenna relies on a remarkably lean research team: two longtime partners, Brenda Earl, who helps manage the portfolio, and Jeff Perry, who specializes in risk arbitrage and short selling. They are backed up by only five other research analysts.

The long-term results are impressive: Zweig-DiMenna has had a 15-year annualized return, after fees, of 25%, vs. the 18.6% annualized total return for the Standard & Poor’s 500-stock index. “They have been one of the top ten performing hedge funds over the last decade,” says Antoine Bernheim, editor of *www.hedgefundnews.com*, who tracks hedge fund results. “And they are only one of two hedge funds with a history

going back prior to 1987 not to experience a negative year,” he says.

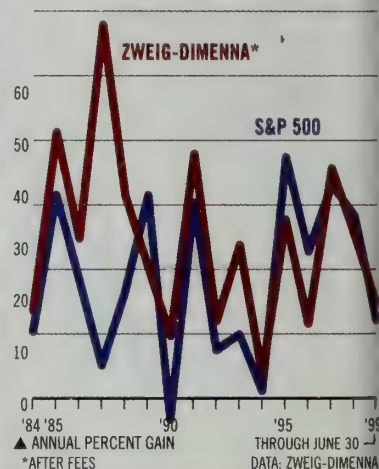
In 1987, when the market crashed, Zweig had its highest net return ever, 58%. And just last year, when Long-Term Capital Management blew up, the average return for large hedge funds was 7%, Zweig-DiMenna was about 26%. No wonder well-heeled investors have been flocking to the fund. Minimum investment is \$1 million.

The fund’s stock-picking formula is about as simple and straightforward as a hedge fund can get. It invests

primarily in U.S. equities; stocks on both the long and short side. There are no exotic derivative trades or heavy leverage. “Zweig-DiMenna has never blown up,” says Taub, “because they don’t invest in countries like Russia, which many other hedge funds do.”

DiMenna, a 40-year-old former high school chess champion, wears few of the badges of hedge fund managers: no Hermes ties, French cuff shirts. There’s not a lot of hubbub in

ZWEIG-DIMENNA vs. THE S&P



office, either. No shouts to traders; most trades are done by E-mail.

But DiMenna is quick to move when news strikes, even when there is a porter in his office. When Earl informed DiMenna on June 29 before news hit Wall Street that there are outages on eBAY Inc., an Internet auction site and one of the fund’s larger holdings, DiMenna quickly attempts to sell a quarter of the fund’s huge position. Within three minutes, the stock is down five points. DiMenna pulls most of the order. He fe



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Finance

the market has overreacted. He starts to buy. eBay comes back on the Internet about half an hour later and the stock returns to its previous trading price within bounds. By the next day, the stock has risen an additional 10 points.

"Joe has one of the most flexible minds on Wall Street," says his partner, Jeff Perry. "He could be long stock one day and short the market the next. Where people make mistakes is when they become a personal fight for them and they stay too long."

But it isn't just individual stocks matter, it's also macro issues. In after a strong first half with the fund more than 30%, Zweig and DiM decided to hedge the portfolio by selling many stocks and adding to their position. It was a prescient call.

"BEST MOVE." Recently, some of the winners are Liberty Media Group, Enron, Iridium World Communications Ltd., a satellite phone system, has been one of their successful short position

Finding good stocks is about judgment, future perception, says DiMenna. According to Keynes, if you're going to bet on who's going to win in a beauty contest, don't bet on who you think is most beautiful, but who you believe judges think is most beautiful."

If beauty is in the eye of the beholder, then the market must be a heart-stopper for DiMenna. The son of an elementary school principal and nurse, he has been passionate about his focus since he was 13. In 1976, still a finance student at Fairfield University, in Fairfield, Conn., he penned letters to Zweig, whom he had never met, sharing with him some investment ideas. His precociousness paid off: Zweig hired him sight unseen as a summer employee. "It was one of the best moves I've ever made," says Zweig.

In 1984 the two decided to start a hedge fund with \$2.5 million. "I didn't know enough at age 25 to be as scared as I should have been," says DiMercurio. For years, he worked more than 100-hour weeks. Now married and an accomplished horseback rider in his off hours, he has a bit more time to reflect.

When Zweig-DiMenna came on scene more than 15 years ago, there were a handful of hedge funds. Today there are thousands. DiMenna suspects that future volatility and a downward trend in the market could be trouble for many of the newer players. "I think a lot of people are very inexperienced.... And when a downturn comes, it's a hard time to figure out how to be short and how to be hedge

If 1987 is any guide, it should be no-brainer for Zweig-DiMenna.

By Debra Sparks, in New York

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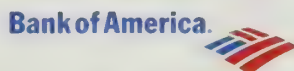
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SIEBEL

COMMENTARY

By William Echikson

IT'S EUROPE'S TURN TO SWEAT ABOUT SWEATSHOPS

The charges were explosive. Girls as young as 14 were forced to toil for 70 hours or more each week. They could go to the toilet only two times a day, with a day's wage deducted if they stayed more than three minutes. Management conducted regular pregnancy tests and dismissed expectant workers. Union supporters were fired.

When German members of the Clean Clothes Campaign learned last summer that the El Salvador factory produced clothes for sportswear giant Adidas-Salomon, they leaked the news to a German television station. In response, Adidas pressured the factory's owner, Taiwan-based Formosa Textile, to not hire workers under 16, cut mandatory overtime, and end the pregnancy tests. "Our brand is associated with high ideals such as commitment and honesty, and consumers need to be sure that these words apply to our supply chain as well as the sports arena," says David Husselbee, Adidas' director of social and environmental affairs. Husselbee himself is a Save The Children veteran who fought child labor production of soccer balls in Pakistan before Adidas hired him in January to negotiate with Clean Clothes.

PANGS OF CONSCIENCE. For years, European apparel makers such as Adidas have gotten away scot-free while Nike and other U.S. rivals have been pounded by sweatshop charges. Now, activists are mounting the same kind of campaigns against European brands. As in the U.S., the pressure comes from exposure of dangerous working conditions, both in Asia and closer to home in Eastern Europe.

The European movement is a welcome development. As Europe opens its doors to global goods, consumers

are buying clothes made in sweatshops from Mauritius to Moldova—and feeling pangs of conscience when they hear about it. Their growing concern heightens the odds that labor standards will improve. Together, the U.S. and Europe account for some 40% of global apparel consumption, according to the European Textile Assn. If both adopt similar standards,

also are resisting demands for independent monitoring and big wage increases, which they fear could price them out of the market. "We must be responsible, but also pragmatic," says John Greene, the head of code of conduct for C&A in Brussels, one of Europe's largest clothing retailers.

The Clean Clothes Campaign started in 1990 with a drive against C&A

but only gained momentum in the past year or two. Since 1997, human rights, labor, and religious groups have formed a loose alliance under the Clean Clothes banner and have opened nine branches across Europe.

VULNERABLE. The alliance's primary tactic is to pressure companies through exposés. In 1998, Clean Clothes organized a "people's court" in Brussels that put C&A on the hot seat for allowing a Zimbabwe supplier



CONSUMER PRESSURE: A march against child labor in Barcelona

it could slow the cutthroat competition that keeps wages and working conditions at rock bottom around the globe. Moving in that direction, on July 7, Adidas joined the Fair Labor Assn., a U.S. anti-sweatshop group.

So far, most European apparel companies have vacillated between conciliation and confrontation. Several are adopting new codes of conduct for minimum labor conditions—and demanding that their subcontractors adhere to them. But most employers

to suppress unions. Greene dismisses the episode as a kangaroo court. Swedish activists have homed in on their country's hippest—and therefore most vulnerable—retailer, Hennes & Mauritz, which has 550 stores in 12 countries. Clean Clothes also helped Italian journalists to uncover charges that Benetton subcontractors in Turkey used child labor. The Italian garment maker denies the charge.

Clean Clothes hopes to ratchet up the pressure with high-profile protests at next year's European soccer championships. It also is investigating subcontractors in Romania and Bulgaria.

Such initiatives can be painful for executives. But if the anti-sweatshop movement takes hold in Europe as it has in the U.S., employers may find they're better off if they all sign on to higher standards.

The Clean Clothes campaigns may prod Europe and the U.S. to adopt similar labor standards

Echikson writes about Europe from Brussels.

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THE EMPTY SPACE AT PARK PLACE

With its tough, respected CEO out sick, the casino company's investors are nervous

Even in an era of hyperactive chief executives, Arthur M. Goldberg stands out as particularly energetic. At 6 feet, 1 inch and 180 pounds, the 57-year-old CEO of casino operator Park Place Entertainment Corp. is an avid jogger and weightlifter who as recently as five years ago worked out with the Rutgers University football team. So it came as a shock to investors when news filtered out in early June that Goldberg was confined to the third floor of the extended-care unit of Baltimore's Johns Hopkins Hospital with what his company says was a lingering "respiratory infection." When the stay stretched to three weeks, worries about Goldberg's health pushed Park Place's stock price down 5%, helping to reverse a 50% rise since December.

The CEO's extended absence couldn't have come at a worse time for Park Place, a seven-month-old spin-off from Hilton Hotels Corp. Goldberg is the mastermind behind its plan to become the largest and most diverse gambling company in the U.S. Even as Goldberg rested at Johns Hopkins, his chief financial officer, Scott A. LaPorta, was hustling to line up financing for Park Place's \$3 billion all-cash bid to buy the Caesars casino operations from Starwood Hotels & Resorts. Before Goldberg's illness, Park Place planned even more acquisitions. And the whole strategy is built around Goldberg's proven abilities to wring excess costs from casinos. "There is never a good time for a CEO to get sick," says one investor who holds a large stake in Park Place. "We're not worried yet, but if he stays out much longer, we're gonna get very antsy."

Company officials deny that Goldberg's hiatus poses any long-term implications. He returned to his home in New Vernon, N.J., on June 30, and company officials say he's getting better. BUSINESS WEEK was initially told that Goldberg would be available for an interview, but it was canceled. Insiders now say Goldberg is not expected back at the company until late July. In his place, four well-seasoned executive vice-presidents have taken on his responsibilities: Clive S. Cummis, a longtime casino-industry lawyer; Wallace R. Barr, who runs the Atlantic City and Mississippi casinos; Mark Dodson, who runs the Las Vegas operations; and CFO LaPorta. Hilton Hotel CEO and president Steve F. Bollenbach, Park Place's non-executive chairman, checks in once a week or so.

None of Goldberg's operating executives



GOLDBERG

The chief's turnaround formula: Watch costs like a hawk

tives have his credentials as a taskmaster, however. A trial lawyer, Goldberg came a mile league taken an artist in the 1980s after seeing his family's trading business Transco Group Leaseway Transportation Co. developed a similar turnaround formula: watch costs like a hawk. Goldberg's approval is still required for more than \$5,000, and he can be seen jotting down wasteful expenses on the back of an envelope as he tours his properties. Says Jason N. Ader, an analyst at B. Stearns & Co.: "Arthur instills a certain level of fear, I think, in executives."

SIZE MATTERS. Goldberg's greatest test came in 1991 after he bought 5.4% of nearly bankrupt Bally Manufacturing Corp. for \$15 million. He cut overhead to \$5.7 million from \$38 million, sold off private jets, closed the executive dining room, and spinning off the Jack LaLanne, Tanny, and other health club chains. By 1992, Bally's operating earnings were up 25% over the previous year, to \$2 million.

Still, Bally was a small player in an industry where size matters. The name of the game is to have the most casinos in Las Vegas or Atlantic City so that gamblers out on the town never str



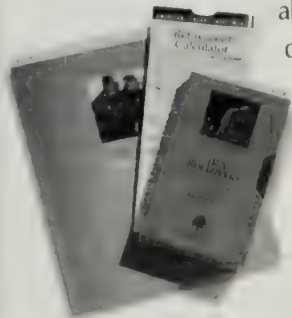


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Goldberg cut costs at Bally's/Hilton casinos by nearly \$70 million

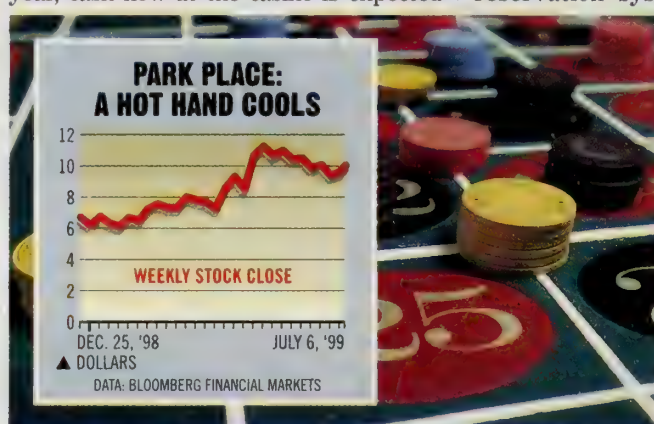
to a competitor. So Goldberg went shopping, talking to both Circus Circus and Caesars World Inc. In 1996, Bally was purchased by Hilton, and Goldberg wound up as president of the combined \$2.6 billion-a-year casino operations. He cut nearly \$70 million in costs—roughly twice what Wall Street expected. Diversifying the Las Vegas Hilton, the worst-managed of Hilton's casinos, away from a policy that catered primarily to Asian high rollers, he opened its four 15,000-square-foot Sky Villa suites to more customers and renovated the stodgy casino to lure more locals. This year, cash flow at the casino is expected

lock on a lot of valuable real estate.

Add to that the challenge of making Park Place's own Las Vegas project: In September, the company scheduled to open Paris, a 2,900-room, \$760 million French-themed casino, was built for far less than the Strip's other theme-based behemoths, which routinely run \$1 billion or more. It's a siphon business from the older, politically attached Bally's Las Vegas casino, whose operating earnings fell 4% in the most recent quarter. Or, with Paris rooms priced higher, using a shared reservation system, the two casinos

could complement each other.

WRITE-OFFS. With a healthy Goldberg crack the whip, the mix could prove wildly. Caesars' casinos are plagued by highly volatile earnings. Last year, operating earnings were up 25%, to \$318 million. But in 1998 they fell 23%, mostly because of write-offs for bad debts from



to hit \$58 million, double the 1997 level.

But when the Hilton casinos were spun off last December, Goldberg returned to his true love: buying companies. Insiders say he named the new company Park Place because it represents a key space on the board of his favorite game, Monopoly. In the past year, Goldberg paid \$895 million in stock and assumed debt to purchase Grand Casinos, which gives Park Place three casinos in Mississippi, the hot new gambling region in the Gulf of Mexico.

WIDE FOOTPRINT. The Caesars acquisition, meanwhile, will give Park Place arguably the best brand name in the casino business. It would control three of the four corners in Las Vegas' most profitable intersection and 15% of the Strip's casino space. In Atlantic City, Caesars sits next to Park Place's other two properties, Bally's Park Place and the Atlantic City Hilton, giving the company 28% of that city's floor space. That's second only to Donald J. Trump's three casinos, which control 30%. Says Los Angeles gambling consultant Saul F. Leonard: "[Park Place] would have a

those Asian high rollers. The Atlantic City casino spends so much money providing free food and lodging to wealthy gamblers that last year, it had a negative cash-flow margin, compared with 10% for Bally. Park Place pledged to cut as much as \$50 million in costs by consolidating purchasing, laundry, and other joint operations with those of other Park Place properties. Then Goldberg got sick.

Of course, Park Place isn't the casino giant that has been dealt a difficult hand. Other casino developers, especially Mirage Resorts, have taken a hit on Wall Street recently as lavish new casinos suck business away from the older properties. Mirage's stock price has tumbled by about 40% since the end of April.

Clearly, this is a business where even the best get burned when they take their eyes off the business for very long. That's what is making some Park Place investors nervous. And if Goldberg doesn't return soon, Bollenbach and other company backers may have little choice but to reshuffle their deck.

By Ronald Grover in Los Angeles

Meeting Electronically

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etings are a crucial part of today's business environment. And as globalization increases, as companies establish a presence in local and remote markets, as enterprises find it expedient to tap into resources scattered around the globe, and as many corporations implement telecommuting programs to meet local mandates while improving their employees' quality of life, the need for meetings is increasing.

Executives at many companies are discovering that today's electronic conferencing tools, as well as the ubiquitous Internet, give them the ability to have productive meetings without the need and expense of travel. And a fundamental change that is rocking the conferencing and collaboration industry is that users are finding that it's not just about intra-company meetings anymore.

Electronic meetings are proving to be a cost effective, highly efficient means for communicating with cus-

tomers, vendors, and corporate partners as well as for distance education. In fact, the new electronic meeting tools make it possible for sales and marketing to establish a higher level of customer intimacy, at lower costs. Indeed, many believe that sales calls are the "killer app" for electronic meetings and videoconferencing. For more information on products and applications of teleconferencing, check out the TeleSpots section of www.telespan.com.

Electronic Meetings — Technologies and Benefits

With the wealth of products now entering the markets, it's easy to get confused about what technologies are driving what applications and how new products fit into the big picture. You may find it helpful to think about these products and technologies as falling into three categories.

Conferencing (telephone-like) enables two-way, real-time communi-

cations. Conferencing includes both audio calls and videoconferences and may involve more than two participants if a multipoint bridge or bridging service is used. The latest generation of conferencing equipment — set-top appliances and PC-based conference room systems designed for departmental conference rooms and remote offices — has really set the industry on fire. These devices are easier to install, operate, and manage than ever before, even by non-technical personnel. And they are compatible with the installed base of room systems. The result: large companies with some videoconferencing gear already deployed now find that they can extend the technology deeper and broader within their corporation; small companies that have been unable to justify conferencing, or have been unable to afford traditional room systems, now find that these appliances are well within their budgets. Major benefits include improved corporate-wide communications, better teamwork and coordination for distributed project teams, reduced decision-making times, and reduced travel expenses.

Broadcasting (TV-like) is real-time broadcasts (audio and video) to all or many on the network. Broadcasting

Spectron: Industrial Strength Distance Learning

Spectron Corporation (Tulsa, OK) is a value added reseller of software for healthcare providers. Spectron specializes in supporting small and rural hospitals in Kansas, Minnesota, Oklahoma, and several other mid-Western states. Spectron's software is bundled with a full complement of installation and support services, but clients must pay for any onsite costs associated with travel and expenses for Spectron trainers. Recently Spectron enhanced its product line by offering customers training via videoconferencing. The company bought a Sony Mini 1000 small group system for the headquarters and recommends that customers get T1 service if they don't already have it for telemedicine and buy Sony DMS 1000 desktop-based system for this program. According to Lisa Simpson, Spectron's implementation manager, the Sony DMS is easy to set

up and after that, we do the software training via video. This saves wear and tear on our trainers; it also saves us and the customers travel expenses. Payback is very quick. But even more important, the video-based training is more effective. If we go on-site, we usually give a four to five day course which really saturates the students. We have to do this to justify the travel time and expense. With video, we can break the course down into four or five one-day sessions spread out over time and the students find it easier to learn. Video really lets us do a better job." One of the key requirements for Spectron was a low cost videoconferencing system that would handle data sharing readily. Adds Simpson, "We need to be able to walk the student through our software a screen at a time and to see what they are doing. PC-based videoconferencing fits the bill nicely."



Videoconferencing with Sony's computer-based 5100 system.

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to any TV*. And at under \$5,000, almost anyone can afford one. Not only that, buy a Sony Contact system between June 1, 1999 and October 31, 1999 and you'll get a 27" (viewable area measured diagonally) Sony Trinitron® Color TV at no additional charge—a \$649* value. So if you want to be more productive, why are you still sitting there?

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Bankers Trust: Extending the Network

Bankers Trust is a worldwide financial services organization. The company has been using traditional group videoconferencing systems for over 10 years and now has approximately 100 room systems deployed around the globe. Recently, the company installed 35 Polycom ViewStations, videoconferencing appliances that connect to an ordinary TV but use digital phone connections and high performance hardware to deliver top quality audio and video. According to Daniel Hochstein, vp of video conferencing and audiovisual services at Bankers Trust, the Polycom ViewStation has become the company standard for videoconfer-

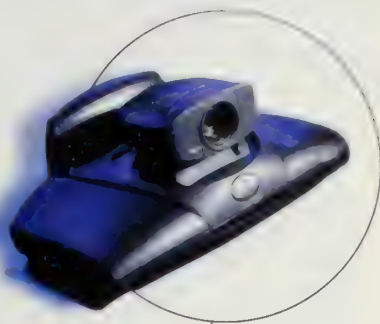
encing. We do a lot of face-to-face meetings as well as remote presentations. The major benefit of the videoconferencing gear is the savings on travel time. Saving on travel costs is nice too, but secondary. The low cost of the ViewStation equipment means we can justify deploying videoconferencing gear in more locations, even some of our smaller offices. The ViewStation is very versatile with great quality video, and of course it can talk to any of our older room systems."



The Polycom ViewStation connects to an ordinary TV set and uses a digital phone connection.

typically takes place over satellite TV networks, private video networks, and data networks. In the real world, a technology growing in importance is multicasting, which is the delivery of a single stream of information to many people (subscribers) on the network, as opposed to everyone on the net. When more than a few people are involved, multicasting is a vital step to conserving bandwidth on a corporate network. The alternative is unicasting, which sends a separate stream of packets to each receiver and uses up much more network resources. Casting technology allows companies to take a live video stream from any source, digitize the stream and send it over the corporate network where it can be viewed by any employee with a web browser or tablet. Major benefits of broadcasting include faster delivery of key information and reduced training expenses. In addition, casting is more convenient, since receivers can watch or listen to the broadcast from the comfort of their own offices.

Briefings (VCR-like) are personal, one-on-one video (or audio) briefings. Briefings use unicasting technology, so each user has VCR-like control over the content – fast forward, pause, rewind, etc. In a corporate environment, content is saved on a special computer known as a streaming server and users can access the stored materials over the corporate LAN at their convenience. This use of streaming files is rapidly penetrating the corporate training and distance education markets because it increases convenience while dramatically reducing costs. Major benefits accrue from elimination of video tape libraries and their incumbent expenses for duplication and distribution; more convenient desktop access for LAN-attached users who need no special equipment for viewing files; easier



spycam?

cyclops?

hovercraft?

updating and management of content materials since there is only one master copy to maintain; and superior controlled access to sensitive information.

Technology Trends

Each new generation of conferencing and collaboration equipment has improved on reliability, interoperability, and ease-of-use. Combined with declining prices and new network-based management tools, the equipment for electronic meetings is now easier and much lower in cost to deploy and support.

The impact of the Internet cannot be overestimated. It is now a source of news and entertainment and is rapidly becoming a low cost, easy-to-use platform for remote presentations, meetings, and even real-time conferencing.

Data sharing and remote presentations are valuable additions to videoconferencing and audio conferencing functions. New products range from electronic whiteboards and PC-based sharing software to full blown remote presentation programs.

Perhaps the most exciting trend today is the emergence of solutions and services for web-based remote presentations. These allow any user with Internet access to attend a visual meeting while the audio portion is carried over either IP or the public switched telephone network (PSTN).

Broadband access is about to explode. New technologies from the phone companies and from the cable TV industry promise to bring multi-megabit multimedia services to homes as well as to small and medium offices, all for a fraction of the costs of today's services.

The Future

Electronic meetings are poised to take advantage of the shift to IP networks, to the ready availability of broadband connections, and to an Internet-literate generation that sees the Web as the fastest growing source of consumer entertainment and news, the most talked about technology for e-commerce, and an increas-

ingly important network for audio and video communications and remote presentations.

"Savvy users are finding that electronic meetings can do far more than save money on travel expenses. They can shorten communications paths, speed decision making, improve teamwork, cut product development cycles, improve relationships with customers and key suppliers, and help

corporations, healthcare facilities, educational institutions of all kinds extend their reach.

This Meeting Electronically supplement was prepared by Knowledge Industry Publications, a subsidiary of Phillips Business Information, Inc.

Written by: Elliot Gold, President,
Telespan Publishing Corp.
Andrew Davis,
Wainhouse Consulting Group

Computer Sciences: Forging a Worldwide Sales Team

Computer Sciences Corporation develops individual business solutions that are delivered by 50,000 employees in more than 700 offices worldwide in areas such as management and information technology consulting, systems consulting and integration, operations support and information services outsourcing. Recently, Gerard Dube, president of CSC's Integrated Business Services Group, installed several Tandberg videoconferencing systems at key locations around the globe to facilitate close integration of a worldwide sales strategy. "We are always chasing really large, strategic and complex outsourcing deals with large global companies, and I needed to be able to bring my distributed sales force together in an interactive

way to coordinate strategies and tactics," says Dube. "The two major benefits we've realized so far with this program are improved communications and teamwork, and reduced travel time," he adds. CSC chose the Tandberg system for two reasons — Dube wanted something easy enough to use so that he could run a videoconference without technical or administrative help, and Tandberg's "384 for 384" leasing program made the costs easy to understand and budget for. Another benefit his sales team is now realizing: with videoconferencing, it is much easier to bring in a remote CSC expert, of which there are many, to consult on a specific project issue. Again, the cost and time burden of travel are eliminated.



Tandberg's Dual Vision 5000 videoconferencing system in action.



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Group videoconferencing isn't a luxury item anymore. Thanks to Polycom's ViewStation, it's an affordable, essential business tool that's perfect for gaining a competitive edge in today's global marketplace. ViewStation's integrated presentation capabilities mean you're not just Meeting on-screen. You're sharing presentations and data directly with co-workers and customers in remote offices. When you use ViewStation together with Polycom's StreamStation™, you can also stream and record all your media content over the Web. And Polycom adds its market-leading audio technology, complete with single or dual microphones, for a system that delivers maximum sound clarity to any size meeting — from large conference rooms to smaller breakout rooms to individual offices. ViewStation takes up space about the size of this page and sits conveniently on top of any size television monitor. It's convenient, extremely easy to use, and costs a fraction of the price of other high-end group videoconferencing systems.

We call this new way of work e-Meetings. And from now on, things will never be the same.

From now on, any team, in any company anywhere, can run more effective meetings with this easy-to-use, plug-and-play system that can be set up in minutes. ViewStation is a clear-as-life videoconferencing tool, starting as low as \$3,999.*

Call toll-free 1-877-POLYCOM ext. 204 for all the features, facts, and benefits of using ViewStation in your organization today. For international inquiries, call 408-526-9000, ext. 6951.



THANKS TO NEW
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YOUR FUTURE IS
EASIER THAN EVER

BusinessWeek Investor



Building The Best Retirement

BY MIKE McNAMEE

Retirement—aahh! Leisurely days spent traveling, golfing, volunteering, visiting friends and family, or just relaxing with that mountain of books you've meant to read since college. With longer life spans and better health than your parents' generation, you expect your golden years to be active, exciting, and rewarding.

Retirement planning—ugh! Long, dusty hours spent hunched over brokerage statements, benefits brochures, budgets, and insurance policies. In the back of your mind, you fear the message this tedious exercise might yield: Squeeze all the fun out of your life now, or you'll live out your old age on the Alpo plan. If you retire earlier and expire later than your forebears, you'll have many more years to fund—and less hope that Uncle Sam's pinched benefits will tide you

over. Little wonder that polls shows fewer than half of working Americans have even tried to figure out what they need to save.

Hey, it isn't that bad. Chances are, unless you've been on a desert island for the past 20 years, the bull market has done wonders for your nest egg. And planning is easier than ever now, thanks to a wealth of tools that help crunch numbers and untangle the devilish details of investments and taxes. Plus, you have this: BUSINESS WEEK's Annual Retirement Guide.

Our message? Retirement planning is more than just number-crunching and poring over mutual-fund ratings. It's deciding how to live the rest of your life: how long to work at what you're doing now, whether to downshift into a second career, when to go to full leisure mode. It's balancing financial demands. And it's making crucial decisions far enough in advance.



ment Plan

help get you going, we've singled out key challenges at three stages of life: your mid-40s, and mid-50s. We'll give you tips to steer you to tools to build your own plan—and someone to help you do it. In the articles that follow, you'll find sample portfolios and advice on everything from figuring out your Social Security benefits to whether and when to in- against a nursing home stay. By the time you're done reading, you'll be ready to gather up those statements, fire up your PC, and face your future.

NE FOR COLLEGE OR RETIREMENT?

Today's 30-year-olds don't need lectures on the importance of their finances. Coming into the workforce when traditional pensions are fading memories, Gen Xers know that no one else is taking away cash for their future. For them,

retirement planning is basic—budgeting, saving, and getting the most out of employer benefits. The thirtysomethings' key challenge may be resisting lifestyle creep as their salaries climb early in their careers.

Dawn and Myron Glenn of Los Angeles faced that problem this year. With a combined income of more than \$100,000, "we're both making good money," says Dawn, 34, a partner in a Los Angeles law firm. "But we didn't feel like we had any control." The Glenns hired Percy Bolton, a Los Angeles financial planner whom Myron, 35, also a lawyer, had known since college.

The result: a tune-up for the Glenns' 401(k) plans, advice on life and disability insurance, and a plan to control spending and pay off credit cards and student loans. This tack hasn't turned the Glenns into Grinches. When Myron wrecked his car, he replaced it with a \$35,000

SPECIAL REPORT

The Planner
Page 108

Asset Allocation
Page 118

Social Security
Page 120

IRA/401(k)
Drawdowns
Page 122

Long-Term Care
Insurance
Page 127

Assisted-Living
Facilities
Page 132

Adapting a House
for the Aging
Page 136

COMMENTARY:
The Evils of
Age-Segregated Living
Page 138

The Barker Portfolio
Page 136

Land Rover. But on Bolton's advice, he cut costs by trimming options and leasing instead of buying. "We're definitely aware of what we're doing with our money and where it's taking us," says Myron.

With their first child on the way, the Glenns will soon face the big parental challenge: planning how they'll pay for college. The old wisdom was to pile cash into a college fund until the kids graduate, then save like mad for retirement. But

parents with 401(k)s would be crazy to pass up two powerful advantages—an early start on tax-deferred compounding and employer matching funds. Typically, employers will pony up 50¢ to \$1 for every dollar, up to 6% of your pretax income, that you contribute to your 401(k). That can yield you an instant 50% to 100% return on your savings. To put this free money to work, pump into your 401(k) the largest amount your employer will match, then put additional savings in a college account. If your income qualifies you for a Roth or traditional individual retirement account (IRA), you can use those as college-savings vehicles, too.

How to invest in your 30s? Take some smart risks—you've got a lot of time to recover from any market setback. A portfolio made up solely of stocks or equity mutual funds is appropriate, if the holdings are diversified among large- and small-cap and international stocks. And focus on low-cost funds. The difference between 1% and 2% annual expense ratios on a \$1,000 investment earning 11.5% over 35 years is \$7,925. But your biggest challenge is amassing investment cash. That means pouring money into your 401(k)—and keeping it there, rather than cashing out when you change jobs. You must also resist the urge to let spending outpace your rising income.

I'M 45. WHAT ARE MY GOALS?

Kande Larson shouldn't have to worry about her future. The 43-year-old MBA puts 15% of her \$70,000 salary into a 401(k) at the computer-systems consultancy where she's director of administration. She maintains a hefty savings account as a hedge against disability—her big concern as a single person. And Larson lives frugally: She just bought her first new car, a Subaru Forester, in 15 years. Aside from the travel she loves and the kitchen remodeling under way at her Minneapolis home, "I'm pretty

low-maintenance," Larson says with a laugh.

Even so, Larson feels the need to assess her fiscal state. "It's time to figure out what my goals are," she says. "Am I doing what I need to do to get there?" While she wouldn't mind working into her 70s, she would like to cut back on part-time well before that.

The mid-40s, planners say, is when the retirement bug bites. "The 45-year-olds look at retirement as the brass ring—they can almost taste it," says Susan Freed, a financial planner in Washington. It's a time for serious analysis, to decide whether your goals—going part-time at 50, launching a new business, say—are realistic. Planning is doubly important if, like so many of your generation, you still have kids to put through school.

Unless you've already got a huge head start, you should aim to put 15% of pretax income into your old-age accounts. That means maxing out your 401(k)

Retirement Planning Resources

GENERAL WEB SITES

AMERICAN SAVINGS EDUCATION COUNCIL (www.asec.org)

DIVERSIFIED INVESTMENT ADVISORS (www.divinvest.com)

FINANCENTER (www.financenter.com)

401KAFE (www.401kafe.com)

INVESTORGUIDE (www.investorguide.com/retirement.htm)

LONGEVITY GAME (www.northwestern-mutual.com/games/longevity)

ROTH IRA WEB SITE (www.rothira.com)

ONLINE PLANNING SOFTWARE

FINANCIAL ENGINES (www.financial-engines.com)

FINANCIALPLANAUDITORS.COM (www.fplanauditors.com)

QUICKEN.COM RETIREMENT (www.quicken.com/retirement)

VANGUARD NAVIGATORPLUS (majestic4.vanguard.com/GUIDE/DA)

SOFTWARE PACKAGES

KIPLINGER'S NETWEALTH (www.Net-Wealth.com) (\$29.95)

MICROSOFT MONEY99 FINANCIAL SUITE (\$64.95 list)

QUICKEN SUITE 99 (\$89.95 list)

An expanded version of this table is available with the July 19 issue at www.businessweek.com



DAWN AND MYRON GLENN: In their mid-30s and



Should You Save for College or Retirement First?



On the way, the couple hired a financial planner

if you qualify, IRA contributions. With a \$5,000 annual limit on pretax dollars you can contribute to a 401(k), you'll probably need to save after-tax dollars as well—in the 401(k), if you like the investment choices, or in a personal portfolio. Asset allocation, the science of dividing funds among classes of stocks and bonds to balance risk and return, becomes vital as your portfolios grow. In shifting markets, two portfolios with the same average return can have vastly different outcomes. Software, Web sites, and financial planners offer plenty of allocation advice. But beware the urge to become too conservative. The

30-year-old couples have babies in 1999. The couple saves 10% of its \$60,000 in pre-retirement. Joe and Janet build a college fund for little Jeannie for eight years, then they start saving in their 401(k)s. Marla and Mark put 6% of their pay—the most that employers will match—into their 401(k)s, earmarking the rest of their savings for Matt's college expenses. Vanguard Financial Planning Service estimates that Marla and Mark, thanks to their earlier and better use of employers' matches, will have an extra \$1.9 million when they retire in 2036.

bulk of your assets should still go into stocks or stock funds, with about 25% in bonds.

Within that mix, which assets do you keep where? If your 401(k) offers a range of good choices, you can set up your outside account to minimize taxes. Conventional wisdom says that bonds, which produce income, go in your 401(k), while stocks, which create more lightly taxed capital gains, should be in your taxable accounts. But Coral Gables (Fla.) financial planner Harold Evensky argues that the reverse strategy actually incurs less tax. With 50% or higher annual turnover, most stock funds don't get favorable tax treatment for much of their return. And bond income, by contrast, can be tax-exempt, if you buy municipal bonds. With yields now exceeding 80% of corporate bond rates, munis are a bargain. But be warned that munis are strictly buy-and-hold: If you have to sell, you'll take a beating on their wide spreads and stiff sales fees.

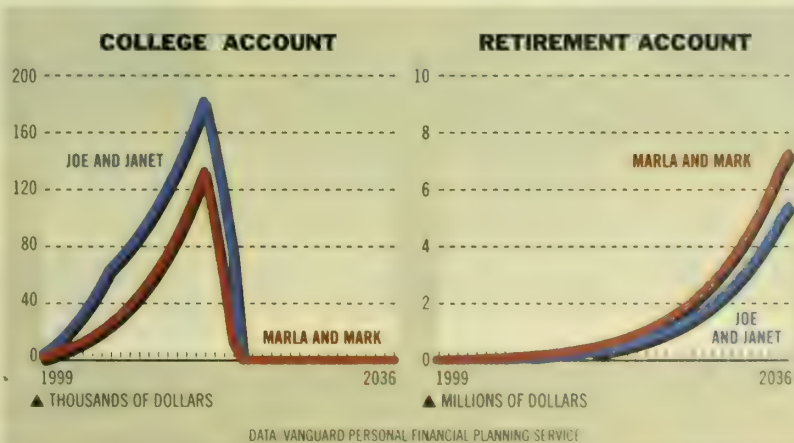
You need to invest in more than just your finances during your mid-40s. More and more workers dream of launching a second career in their late 50s as a means of easing into retirement. If that's your goal, "now's the time to identify and develop the skills you need for that 'mellow job' phase," says Elissa Buie of Financial Planning Group in Falls Church, Va., and president of the Institute of Certified Financial Planners (ICFP).

Conventional wisdom says bonds, which produce substantial income, go in your 401(k), while stocks belong in a taxable account

TAKING STOCK AT 55

Retirement planning in your mid-50s is no abstract exercise. Your portfolio is no longer Monopoly money, but real cash that has to sustain you for decades. The decisions are imminent. Consult or travel? Move or stay put? And no matter how good your planning, you may face barriers you would never anticipate.

Take the unusual problem of Robert Busch, an independent sales rep in Eden Prairie, Minn., who thought he would be retired two years ago. Busch and his wife, Dawn, could live comfortably on their \$3 million portfolio's 8% return. But



Busch can't find anyone to buy out his industrial heating equipment business, which nets him about \$150,000 a year. Three would-be successors washed out, but Busch still hopes to turn over to someone the customer relationships he has developed over 22 years. "Emotionally, I just want to see the business continue," says Busch, 60. "I always planned to be retired by 58—but life had a way of fouling up my plans."

To keep your plans on course, now's the time for specific reality checks, not rules of thumb. Figure out what you're spending now, and project what life will cost when you're no longer working. Don't be surprised if you anticipate spending as much or more. You won't have commuting costs or payroll taxes, but travel, sports, and hobbies in the first, active stage of retirement are expensive, too. **"BOND LADDER."** As a World War II baby, you're more likely to depend on a traditional pension than your younger co-workers. Be sure you know its terms. An executive resisting his wife's pleas to retire at 62 found a clinching argument in calculations by planner Judy Ludwig of Tandem Financial Services in Canton, Mass. The increased pension benefit from each additional year he worked would make the couple's nest



LARSON: At 43, she pours 15% of her pretax salary into a 401(k)

egg last three years longer. But you might not be so lucky. Some pensions, designed to induce turnover among senior employees, shrink when you work past 62 or 65.

Project your portfolio's health carefully, too. You'll want to shift to a more conservative mix boosting bonds to perhaps 50% of your holdings. You should consider using new computerized calculators that highlight the odds of getting the returns you expect. Even with a lower-risk mix, a string of down years combined with withdrawals could boost your odds of outliving your money.

One safe way to withdraw funds is to construct a "bond ladder"—a series of bonds of staggered maturities. Five years in advance, buy a regular or zero-coupon bond to mature in your

first year of retirement for the amount you expect to spend that year, says James Shambo of Lifetime Planning Concepts in Colorado Springs, Colo. Each year thereafter, buy another. The result: You'll always have five years' living expenses covered with safe, well-timed investments—enough to outlast a bear cycle without forcing you to sell stocks when they're down. "Withdrawing money from stocks when they're down locks in losses and doesn't give you a chance to recover," Shambo says.

What if you find a gap between your retirement hopes and your finances? You've still got time to



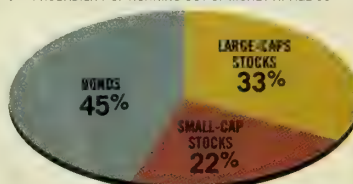
Lowering Risk Via Asset Allocation

A 45-year-old couple earning \$100,000 has \$500,000 in retirement assets and is saving \$17,000 a year. They expect to live to 85, but to be on the safe side, they want good odds that their assets will outlast them even if one partner lives to age 90. Which of these two asset allocations—each with a 10% average return over 45 years—should they choose?

FinancialPlanAuditors.com calculates that they'll have almost a 1 in 4 chance of running out of money with the riskier plan. They can cut the odds to 1 in 25 with a balanced plan.

BALANCED PLAN

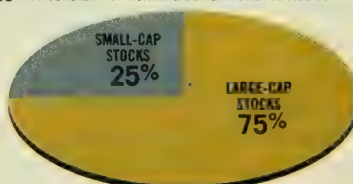
51% PROBABILITY OF EARNING A 10% AVERAGE ANNUAL RETURN
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VALUE AT AGE 90: \$768,301

RISKIER PLAN

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23% PROBABILITY OF RUNNING OUT OF MONEY AT AGE 90



WORST-CASE VALUE AT AGE 90: -\$1,775,687

DATA: FINANCIALPLANAUDITORS.COM

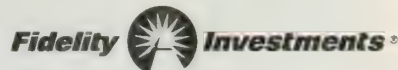
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Where do you want to go today?



BUSCH: At 60, a \$3 million portfolio—but no buyer for his business

adjust. Boost your savings to 25% or 30% of income, and invest a bit more aggressively. Plan to live more cheaply. Or figure on downshifting into part-time work or consulting for a few years before you retire outright. Harry Renner of Rochester, Minn., voluntarily retired from IBM two years ago—but he's still putting in 40-hour weeks at the computer giant. Now, he's a consultant, a less stressful job that better suits the 58-year-old.

THE RETIREMENT TOOLS YOU NEED

If you can manipulate a mouse, you can develop a retirement plan. That's the message from Web sites and software publishers eager to tap

aging baby boomers' financial anxieties and Xers' fascination with the market. Planning (table, page 110) are indeed better than crunching numbers, projecting risks, and dling, or at least spotlighting, tricky tax pension problems.

No PC can deliver complete peace of about your old age. So even do-it-yourself investors turn to financial advisers for guidance and reassurance. "Eventually, you'll need a higher level of sophistication than you can get software," says ICFP President Buie.

Software and the Web, however, can get rolling. If you're just starting to think about retirement, cruise to the American Savings Education Council to assess your savings personally and "retirement readiness." You'll find dozens of calculators at FinanCenter and InvestorG. And everything you wanted to know about IRAS can be found on Brentmark Software's **BEST BETS.** Web-based planners are starting to provide services you would expect from personal finance software. Intuit's Quicken.com features a retirement planner that users can link to an online portfolio tracker. Mutual-fund giant Vanguard Group's software offers a bonus of simple advice on estate planning.

The newest calculators have their roots in casinos. They use the Monte Carlo method, a mathematical technique for testing thousands of possible investment outcomes, to assess your portfolio for worst-case results. While two averages might have the same average return, one may keep you solvent in 90% of all possible market forecasts, while with the other you would go broke in 40% of the cases. When your retirement's on the line, you need to shoot for the odds. The best-known Monte Carlo calculator is offered by Financial Engines, founded by economics Nobel laureate William F. Sharpe.

Non-mathematicians may be baffled by Monte Carlo calculators' odds-based output. When you master the charts, however, the results are eye-opening—and they are closer to reality than what-if scenarios run on a traditional calculator. Whatever their algorithm, software planning tools still have one weakness: No program will look into the future for you in the eye and say, "Are you following the budget? Have you bought that insurance?" You must find the discipline to plan and follow through, with or without an adviser to provide it. But that's what it takes to realize that bright retirement that you want so badly.

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How Long Will Your Nest Egg Last?

Say you're 55 now and hope to retire at 65 with a \$1 million nest egg. How long will it last? That depends not only on your portfolio's post-retirement returns but also on how much you plan to spend. Using return and risk factors, for the low-risk portfolio on page 118, Standard & Poor's calculated the number of years that \$1 million could be drawn down at different spending rates, assuming 3% inflation.

FIRST-YEAR SPENDING*	AGE WHEN PORTFOLIO FAILS**
\$100,000	76
90,000	78
80,000	80
70,000	83
60,000	87
50,000	94

*Spending in subsequent years rises in line with inflation.

**Failure is defined as the year when there's a 10% or greater chance that the value of the portfolio will fall below zero.

DATA: STANDARD & POOR'S CORP., BW



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GOOD SPOTS TO STASH YOUR PORTFOLIO



When planning for retirement, asset allocation is all-important. As you save, you need to put together a diversified collection of investments that can shield you against trouble in any one sector. The good news is that the Web provides you with plenty of advice.

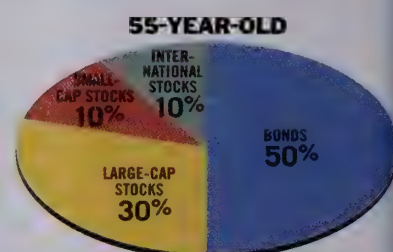
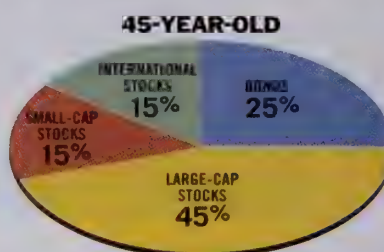
One of the best retirement planners online is at S&P Personal Wealth. Like BUSINESS WEEK magazine, it's a unit of The McGraw-Hill Companies. You'll find it at www.personalwealth.com or through www.businessweek.com/investor/. Personal Wealth will give you, at no charge, an indi-

vidualized plan for retirement-asset allocation. subscribers, who pay \$9.95 a month, have access to Standard & Poor's recommendations for stocks and mutual funds to plug into allocation plans.

To give you a taste of what Personal Wealth can do, we asked S&P to come up with model portfolios for three hypothetical people: a 30-year-old man, a 45-year-old woman, and a 55-year-old man. S&P recommends keeping at least half your money in stocks, even if you're only 10 years from retirement. If your portfolio is less than \$50,000, you're better sticking with equity mutual funds instead.

HOW TO RETIRE

Investment Strategies for Three Stages of Life



FUNDS FOR THE LONG HAUL...

S&P recommends these mutual funds for long-term savers

NAME/TICKER SYMBOL	S&P STARS**	TOTAL RETURN*	
		3-YR	YTD
LARGE-CAP			
LEGG MASON VAL.TRUST-PRI. LMVTX	5	44.4%	19.9%
SELECTED AMERICAN SHS. SLASX	5	30.8	18.2
STRONG GRTH. & INC. SGRIX	5	31.3	15.1
MID/SMALL-CAP			
ACCESSOR SMALL/MIDCAP ASMCX	5	24.7	9.9
LONGLEAF PT. SMALL CAP LLSCX	5	21.6	10.1
WEITZ VALUE PORTFOLIO WVALX	5	31.3	17.8
INTERNATIONAL			
FEDERATED WRLD. INT. SM. CO. A ISCAIX	5	30.5	40.1
TWEEDY BROWNE GL. VALUE TBGVX	5	21.6	26.2
UMB SCOUT WORLDWIDE UMBWX	5	19.6	12.3
BOND			
HOTCHKIS & WILEY TOT. RET. HWTRX	5	8.1	-1.7
SIT TAX FREE INCOME SNTIX	5	6.7	-0.8
STRONG CORP. BOND STCBX	4	8.6	-0.9

...STOCKS FOR GROWTH

S&P thinks these stocks are good long-term bets

NAME/TICKER SYMBOL	P-E RATIO***	S&P STARS**	TOTAL RETURN*	
			3-YR	YTD
LARGE-CAP				
BRISTOL-MYERS SQUIBB BMY	35.2	5	50.6%	8.0
CISCO SYSTEMS CSCO	92.7	5	72.7	44.6
IBM IBM	34.2	5	75.9	43.8
MCI WORLDCOM WCOM	44.7	5	48.3	23.6
SMALL/MID-CAP				
AGCO AG	18.1	5	-24	48.0
TIFFANY TIF	31.9	5	52.1	88.0
UNIVISION COMMS. UVN	104.0	4	NA	83.3
VISX VISX	75.8	5	112.3	296.0
INTERNATIONAL				
DEUTSCHE TELEKOM DT	38.5	4	NA	28.9
GLAXO WELLCOME GLX	31.7	4	32.8	-15.5
NOKIA NOK	46.6	5	116.4	58.1
REPSOL REP	18.1	4	25.7	14.8

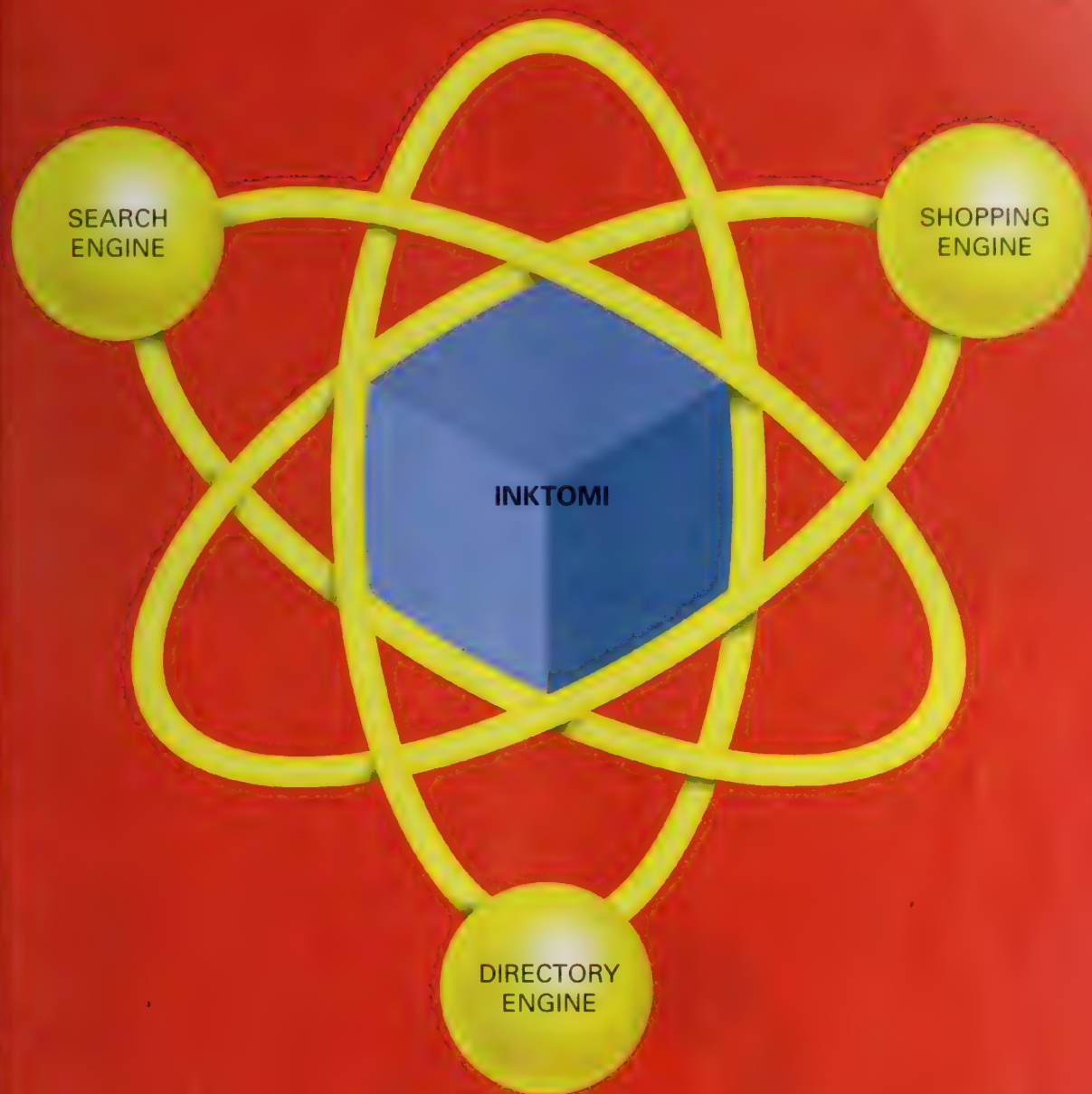
*Through July 2

**Out of possible 5

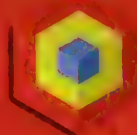
***Estimated 1999 earnings

DATA: STANDARD & POOR'S CORP

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Scope Out Your Benefits

The government's PEBES gives you an early warning

BY ELLEN HOFFMAN

HOW TO RETIRE

When Meg Hughes and her husband, Andrew Laurenson, looked into their Social Security retirement benefits four years ago, they confirmed a nagging suspicion: They would have to play catch-up to have a comfortable retirement. As a result, they closed their home-renovation business in Shepherdstown, W. Va., and switched to careers that would provide steadier incomes. She became a certified massage therapist, and he returned to a previous occupation as a social worker.

The document that supplied the couple's valuable wake-up call was the Personal Earnings & Benefit Estimate Statement (PEBES). This six-page mailing from the Social Security Administration (800 772-1213, www.ssa.gov) estimates a person's benefits based on the highest 35 years of earnings. "When I got the statement, I realized I would only get about \$300 a month in Social Security unless I did something about it," says Hughes, now 54. Her husband, 65, would have been entitled to about \$600. But his career switch enabled him to draw \$886 in monthly benefits when he began collecting Social Security this year.

When making retirement plans for clients, Marilyn Marcosson, a Merrill Lynch vice-

president in Washington, starts with PEBES. She suggests that clients look at the benefit level and see if they can live on it. Often, they say they can't. "That serves as a motivator to make sure savings are moving in

the right direction," she says. If you're between 40 and 47 and have worked at least 40 quarters, you've probably gotten your PEBES sometime since Oct. 1. If you're older than 47 but not yet on Social Security, you should have received a statement within the past four years. But starting this Oct. 1, a new version, called a Social Security Statement, will be mailed annually to workers.

ENOUGH? When reading your PEBES, make sure all income, up to the limit (\$72,600 in 1999), is included. Errors such as a missed year could reduce your benefits because Social Security computes the amount using a formula based on your earnings history to date. Spot a slip-up? Call the agency, and have

your pay stubs, W-2, or, if you are self-employed, 1099 form in hand. If you do have these records, the agency can suggest other ways to verify your income.

Then it's time to determine whether you can live with your benefits. PEBES shows your monthly benefit under three conditions: if you start collecting at 62, the earliest you can so; at your "full-retirement age"—to 67, depending on your birth date—and at 70. If you choose to draw payments between 62 and your full-retirement age, your benefit can fall by as much as 20%. If you wait until 70, your benefit can increase as much as 8%.

You can get a more precise estimate of benefits by using a PEBES order form, which you request either by phone or online. You enter the form the age at which you plan to retire, say, 64—and your own estimates of your future earnings. You then send it to the agency for calculation. You should get the PEBES within a few weeks of mailing the form. Your PEBES could be an eye-opener, even if you may not like everything you see.

Social Security Checkup

► When you get your Personal Earnings & Benefits Estimate Statement (PEBES), check the salary record, name, spelling, birth date, and Social Security number.

► Call the Social Security Administration (800 772-1213) to report any errors. Try to have your W-2s for the years in question.

► If you are unhappy with the projected benefit, order another PEBES. On the request form, ask for estimates based on higher projected wages and on delaying your retirement a few years. This will show what you may need to do to increase your benefit.

► Make sure your spouse gets a PEBES at the same time you do, so you can discuss your joint retirement strategy.



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The Many Ways of Unscrambling a Nest Egg

Options for taking money out

BY ANNE TERGESEN

HOW TO RETIRE

The day you turn 70½ will be a watershed event in your financial life. Until that point, you are encouraged to build your retirement nest egg through tax-deferred savings plans, such as 401(k)s and individual retirement accounts (IRAs). Once you hit 70½, however, federal law says that you must start drawing those assets down.

With only a few minor exceptions, you have until Apr. 1 of the year after you hit 70½ to begin taking what the government calls "required minimum distributions." If you should

happen to miss the deadline, the Internal Revenue Service can levy a 50% penalty on the difference between the amount that you actually withdrew and what you should have taken. As frightening as the prospect of dying without adequately planning for the transfer of your remaining nest egg to your heirs. "For most people, this is their single largest asset," says Ed Slott, who publishes *Ed Slott's IRA Advisor* (663-1340; www.ira-help.com). If you don't follow the rules, he warns, you could "lose 70% of it to estate and income taxes."

The first thing you should do, preferably at the time you first set up your account, is to name a beneficiary. This is a must—even if you are a single person. That's because the IRS permits those who have named a beneficiary to calculate a joint life expectancy when figuring out their withdrawals. Since the life expectancy of two people is necessarily greater than one, this is a good way to spread payments over more years. It also minimizes the amount you must take each year, cutting the income tax due. And it gives your assets more time to grow tax-deferred.

Choosing your estate as the beneficiary will be a big mistake. This can happen, however, if you don't pick anyone and the plan names your estate by default. Because an estate has no life expectancy, you would have to spread withdrawals over your lifetime alone.

A second error is to automatically designate your spouse as beneficiary. If your goal is to leave as much as possible to the next generation, you're better off selecting a younger beneficiary. Still, keep in mind that if your estate is more than \$650,000, your retirement fund could get hit by both estate and income taxes if you leave it to someone other than your spouse. No matter whom you name, review the decision before you turn 70½. If you change your mind after you start taking out money, IRS rules say your annual drawdowns can only increase.

REQUIRED SUM. When planning withdrawals, keep in mind that delaying into the next calendar year after you turn 70½ can backfire. That's because those who wait must take two withdrawals that year, a move that can push some into a higher tax bracket.

To figure out how much money you're required to withdraw, take your account balance as of Dec. 31 of the prior year and divide it by your age or your beneficiary's joint life expectancies. You have three ways to determine joint life expectancy. The simplest is called "term certain." When you reach 70½, look up the combined life expectancy in IRS Publication 590.

Then, for each successive year that passes, you should subtract 1 from the previous number. If a 71-year-old man with a \$500,000 IRA names his 68-year-old wife as beneficiary, the actuarial tables say the two have



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combined life expectancy of 21.2 years. The first withdrawal thus must be at least $\frac{1}{21.2}$ of the \$500,000 account, or \$23,585. In the second year, the couple must take $\frac{1}{20.2}$, and so on.

As is the case with any of the three life-expectancy methods, if you die first, your spouse—unlike any other beneficiary—will be able to roll over the money into his or her own IRA, designate a new beneficiary, and design a new payout schedule. But if your beneficiary dies first, the joint term-certain option offers protection for you and your heirs because the original withdrawal schedule remains. The method's downside is you risk running through your savings before you die.

ZERO EXPECTANCY. The other two ways of figuring life expectancy give you the security of knowing that you'll always have money in the bank. Joint recalculation is available only to married couples. By recognizing that life expectancy improves with every additional year you live, this method lets you go back to the actuarial tables each year to recalculate. This approach gives you the smallest annual withdrawals and taxes and the longest horizon over which the assets can grow tax-deferred. It also ensures that your nest egg won't run out until the tables end at age 115.



If you don't need money from your IRA and want to leave the maximum to your heirs, be sure to use the "term-certain" method

child, grandchild, or friend has no choice but to elect term certain. But if you opt for the hybrid method and your beneficiary is your spouse, Slott recommends putting the younger person on term certain. That's because when both parties die, the heirs get to complete the life expectancy of the person on term certain.

Whichever method you choose, don't forget to inform your plan's custodian. If you don't, you may wind up with the default option, which is often recalculation.

"REALITY CHECK." Which plan is right for you? You need the money to retire comfortably, the recalculation or hybrid method to make your savings last as long as you do. Then, "reality check" on your heirs, advises Christopher Fahlund, senior financial planner at T. R. Price Associates in Baltimore. For example, if your son needs money to buy a house, he's likely to cash out soon after inheriting your account. As such, you won't penalize him if you calculate—a method that mandates a lump-sum payment to heirs.

But if you don't need the money and want to give as much as possible to the next generation, use the term-certain option and name a young beneficiary. You won't reap the maximum benefit while you are alive, because the law forces you to assume the age gap between you and a nonspouse beneficiary is no more than 10 years.

Once you are gone, however, your beneficiary can take withdrawals based on his or her age and life expectancy—minus the payouts you have already pocketed. If you have several goals or beneficiaries, you can divide your account.

If you are intent on leaving your tax-deferred retirement account to an heir, go ahead, but your \$650,000 estate-tax exemption for other assets. If you give your heirs an IRA, they will owe as much as 39.6% of the account to the government to pay the income taxes due on withdrawals. Heirs will get much greater mileage out of \$650,000 worth of stock or cash because income taxes have already been paid, says John Doyle, estate planning manager at Mellon Private Asset Management.

The only two ways around the rules are to keep working for your current employer or to

Retirement Account Mistakes

- ▶ Not naming a beneficiary or method to calculate your life expectancy. If you don't choose, your plan will do it for you.
- ▶ Using a single instead of the joint life expectancy of you and your beneficiary. A combined expectancy allows you to spread withdrawals over more years, minimizes taxes, and gives your assets more time to grow tax-deferred.
- ▶ Not taking required minimum distributions by Apr. 1 after the year in which you turn 70½. The IRS can levy a 50% fine on the difference between the amount you withdrew and the amount you were supposed to take.
- ▶ Assuming that because you took more than the minimum one year, you can take less the next. Again, the IRS can slap you with a 50% fine.
- ▶ Aiming for the lowest required minimum distribution. This can have negative consequences if you outlive your beneficiary.

The problem with this method is that if your spouse dies first, his or her life expectancy drops to zero. That leaves you no choice but to base future withdrawals on just your lifespan. The rules also force you to withdraw the balance when you die, triggering a big tax bill. For this reason, many experts advise clients to stay away from joint recalculation unless they plan to leave the money to charity.

A third choice offers a middle ground. Called the hybrid method, it permits one person to recalculate while the other uses term certain. If your beneficiary is someone other than your spouse, be aware that the IRS permits only account owners and spouses to recalculate. So a

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a Roth IRA, which requires no distributions during your lifetime because it accepts only aftertax dollars. Withdrawals from your employer's 401(k) plan can be postponed until Apr. 1 of the year following retirement. But when it comes to traditional IRAs, you can't delay, whether you are working or not, says Steven Lockwood, a New York pension attorney and co-author of *Individual Retirement Account Answer Book* (Panel Publishers, \$136).

NO-BRAINER. If you die before you reach the age of 70½, your beneficiaries have choices: If they do nothing at all, the "five-year rule" kicks in, requiring the account to be drained within five years. Heirs can also notify their plan's custodian that they intend to spread the withdrawals over their lifetimes.

Margaret Malaspina, author of *Don't Die Broke: How to Turn Your Retirement Savings into Lasting Income* (Bloomberg Press, \$21.95),

says that this can turn even quite a small inheritance into a significant source of wealth, assuming there's an 8% annual return. Malaspina calculates that a 40-year-old who inherits a \$20,000 IRA would realize \$115,000 of income over his or her lifetime, with \$57,000 left in the account at death.

For beneficiaries who are also spouses, a third option is to roll inherited money into a new IRA. This is a no-brainer unless the spouse needs the money to live. In that case, money can be taken penalty-free, but only if it is left in the original account.

Whatever your situation, remember that this topic is capable of confusing even the experts. Seek help from financial planners, accountants or others—but make sure you are not getting pie-cutter advice. To design a successful strategy, your planner must consider your needs not just in retirement, but beyond.

AN EARLY DIP INTO YOUR IRA

Turn 59½, and suddenly you have the option of withdrawing whatever amount of money you want from your individual retirement account. Do it before then, however, and, with a few exceptions such as death and disability, you'll face a 10% penalty. But there is a way around having to pay the substantial fine.

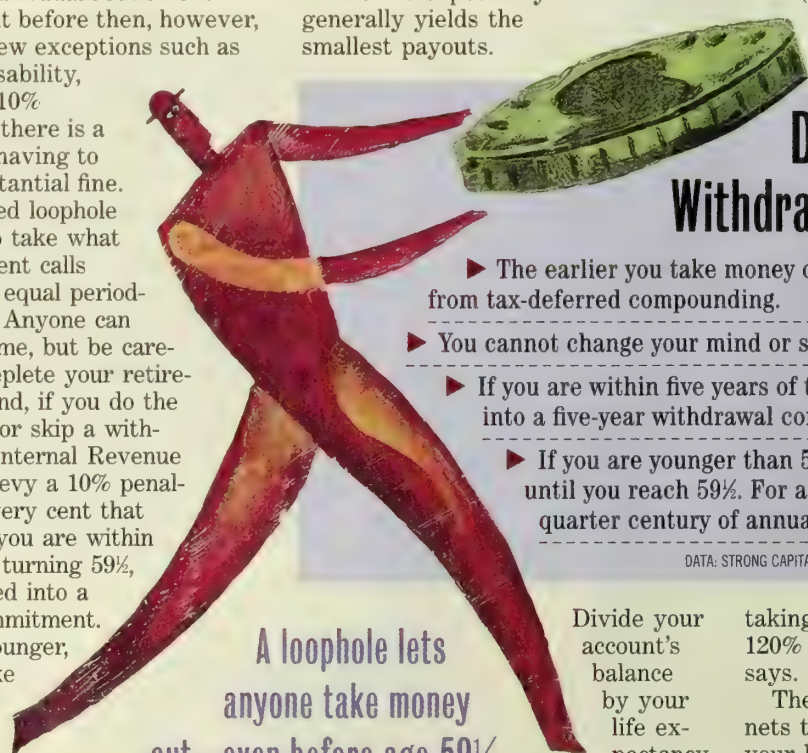
A little-used loophole allows you to take what the government calls substantially equal periodic payments. Anyone can do this anytime, but be careful: It will deplete your retirement fund, and, if you do the math wrong or skip a withdrawal, the Internal Revenue Service can levy a 10% penalty against every cent that you take. If you are within five years of turning 59½, you are locked into a five-year commitment. If you are younger, you must take money out each year until hitting 59½.

GO FIGURE. To do it right, Scott Grittinger, a certified financial planner at Strong Capital Management, recommends that you first figure out exactly how much money you are going to need. The next step is

to determine which of three IRS-sanctioned methods will get you there.

The life-expectancy method generally yields the smallest payouts.

which incorporates an additional factor—a long-term interest rate published by the government (page 2 of ftp.fedworld.gov/pub/irs-utl/afirs.pdf). You can adjust the total by



Downsides to Withdrawing Too Soon

- ▶ The earlier you take money out, the less you will benefit from tax-deferred compounding.
- ▶ You cannot change your mind or skip withdrawals.
- ▶ If you are within five years of turning 59½, you are locked into a five-year withdrawal commitment.
- ▶ If you are younger than 54½, you must take money out until you reach 59½. For a 34-year-old, that means a quarter century of annual withdrawals.

DATA: STRONG CAPITAL MANAGEMENT; BUSINESS WEEK

A loophole lets anyone take money out—even before age 59½

Divide your account's balance by your life expectancy. Go to

taking somewhere between 80% and 120% of the official rate, Grittinger says.

The annuity method generally nets the highest payouts. Divide your balance by an annuity factor found in UP-1984, mortality tables published by the Conference of Consulting Actuaries (847 419-9090; \$15). Once you've drawn up a plan, don't skip withdrawals or switch methods—otherwise you'll get hit with a fine.

Anne Tergesen

IRS Publication 590 and determine this using the recalculation, term-certain, or hybrid approaches that are described in the accompanying story. For higher payouts, you might try the amortization method,

Someone to Watch over You

Long-term care policies will pay the bill

BY ARD GLECKMAN

Back in 1994, Flora and Joseph Zeman watched a neighbor in Tamarac, Fla., slowly decline from Parkinson's disease. As his illness worsened, the neighbor and his wife had to hire a live-in home health aide. "They went broke," remembers Flora Zeman. "They had to sell their house."

Their friends' plight made such an impression on the Zemans that they bought long-term care insurance to shield them from the budget-busting costs of chronic illness. Just two years later, at age 67, Flora had a leg amputated. She has needed her own home health aides ever since. But Flora's policy, which cost her \$1,500 a year, pays up to \$122 a day—plus an inflation adjustment—for her care. "I'm just relieved I got it," she says.

Long-term-care (LTC) policies insure against the risk you'll need costly custodial care as a result of old age, illness, or accident. The best policies pay whether you are at home or in a nursing facility. "Not everybody is going to need frailty care," says E. Craig MacBean, a Richmond (Va.) financial planner and author. But it is so expensive that "nobody can afford to ignore it."

Indeed, the cost can be staggering. A year in a nursing home averages \$40,000—twice that in cities such as New York.

For home care, a nurse's aide gets \$12 to \$15 per hour, while registered nurses can top \$25. Round-the-clock nursing care can run \$600 a day.

NEW TARGET. Because younger people rarely think about the need for such care, LTC insurance has been an old person's product. Only after people watch a friend or relative run up huge costs do they buy insurance for themselves. Now, insurers are trying to change their demographics. The new target: fiftysomethings.

But should you buy? When? And what benefits should you pick from a complex menu of choices? For some, the answers are relatively easy. If diseases such as Alzheimer's run in your family, buy a policy sooner rather than later. On the other hand, if you are elderly and have annual income of less than \$35,000 and assets of less than \$75,000—excluding your house and car—you probably don't want a policy. High premiums



Long-Term Care Resources

BOOKS

LONG-TERM CARE PLANNING: A DOLLAR AND A CENT GUIDE, United Seniors Health Cooperative, 800 637-2604, \$18.50

AGING METHUSELAH: PRACTICAL STEPS FOR PLANNING FOR A LONGER LIFE by Henry C. Simon and E. Craig McBean, Prime Press, \$20

THE WEB

ELDERWEB (www.elderweb.com) Provides a range of resources for seniors, including articles on long-term care insurance.

NATIONAL INSURANCE INDUSTRY OF AMERICA (www.niiaa.org) Offers a good primer on long-term care policies.



ZEMAN: The 70-year-old is assisted by home health aide Savi Benasri

Beware: The gold-plated coverage you buy today may be obsolete when you need it

will cut into your ability to live comfortably.

Remember, Medicaid, the government-run health-care program for the poor, will pay for long-term care—once you spend most of your assets. But Medicare, the federal health-care program for seniors, will only provide short-term home health- and nursing-facility care to help you recover from an illness or injury. You'll get no long-term benefits if you are suffering from a chronic illness or become frail.

Insurers want you to buy LTC insurance at 45 or 50. But many financial experts say you can wait until you are in your mid-50s or even a bit older. "The products are extremely well suited for people in their 60s," says Robert Pearson, CEO of CareQuest, a Neenah (Wisc.) provider of health-care benefits for business and nonprofit institutions. "For younger people, there's just too much distance between when they buy and their need."

Younger buyers pay lower annual premiums, but face more years of payments—and a greater chance they'll get stuck with an obsolete plan. At 45, you can get a solid midrange policy for \$650 a year (table). At 60, the same policy may cost \$1,200. But at 70, premiums will run nearly \$3,000. If you buy at, say, 60, insurers can still raise premiums for your class, and inflation riders will add to your costs, but you'll always pay at the prevailing 60-year-old rate. Another advantage to buying young: You'll have to take a physical and pass a cognitive test to get most individual policies. You could be disqualified if you

suffer from chronic illnesses such as Parkinson's, or show early symptoms of Alzheimer's disease.

But since many buyers won't need care until they are well into their 70s, they could be paying premiums for 20 years or more. And the policies are changing rapidly: The gold-plated coverage you get today may be obsolete when you need it. Ten years ago, most policies were geared to nursing-home coverage. They offered only limited benefits for home care and paid nothing for assisted living. Today, those are usually covered. But continuing care retirement centers (page 132)—facilities that offer independent apartments and some nursing care at a fixed monthly fee—are not. They may be 10 years from being covered. **SELF-INSURE?** Insurers will let you opt out of a more modern policy. But you may have to retake that physical exam, and your premiums will usually reset at the age you change coverage. There's another reason to delay: It helps to have some idea of where you'll be living at retirement. That may be easier to do now than at 60 than at 50.

Can you self-insure by building a nest egg to pay for future frailty-care costs? It's doable, but takes lots of discipline. For example, a 50-year-old woman can buy a top-of-the-line policy for a \$100,000 initial annual premium. If the price

each year by 5%, at age 80 she will have about \$66,000 in premiums. And she would have a lifetime benefit worth about \$500,000.

Say the same 50-year-old invests \$1,000 in a mutual fund each year and increases her annual investments by 5% annually. If her portfolio appreciates 8% annually, she would have a pre-tax portfolio of about \$200,000 at the end of the third decade. Without an insurance benefit, the money is hers to use as she pleases. But it is not \$500,000. And if she suffers a catastrophic illness at, say, 70, she will be far worse off than if she had a policy.

Let's say you're ready to buy. You'll need to choose from a mire of options. Most policies are just selling a pool of money. If you buy \$100-a-day coverage for five years, you are not getting up to \$182,500 in insurance. But no policy is that simple. You'll need to learn about daily benefits, inflation riders, elimination periods, and benefit periods. "Even for a sophisticated person, it's a mess," says Martin Weiss, chairman of Weiss Ratings Inc., a Palm Beach Gardens (Fla.) firm that analyzes long-term-care insurance (800 289-9222).

Here are some of the key variables:

■ **Benefit period.** This is the number of years of coverage you are buying. Policies may offer three years or five years, or lifetime benefit. A lifetime plan will give you greater peace of mind, but you'll pay about 30% more than for a five-year policy.

How long should you be covered? In 1995,

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Earn Quadruple Miles

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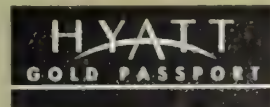
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cording to the Health & Human Services Dept., an average nursing home stay was about 2½ years. But for more than 70% of patients, it was three years or less. And only 14.6% remained for more than five years. According to industry estimates collected by CareQuest, stays in assisted-living facilities averaged about 18 months.

■ **Daily Benefit.** Figured in maximum dollars per day. This number may be the toughest to work up. In part, it will depend on where you plan to retire, since long-term care costs vary so much around the country. You also should factor in your monthly Social Security or private pension benefits, since you can use those funds to help pay for care.

Nancy P. Morith, a Princeton (N.J.) independent insurance broker, figures it this way: In her state, a nursing home stay averages \$200-a-day, while assisted living or an eight-hour-a-day home health aide costs about \$140. In that environment, she says, a comfortable policy should probably start at \$140. "I don't think you need to in-



Your policy will begin paying when you're unable to perform what's called the activities of daily living

look for the most generous rider you can afford, especially if you buy at 55 or 60.

■ **Benefit triggers.** Your policy will begin paying when you're unable to perform what's called the activities of daily living—routine actions such as eating, bathing, and going to the bathroom. Usually, policies won't pay off until you need help with at least two or three. But who decides? Most policies provide care managers to make these calls. Make sure you get to the advocate. And get a policy that provides flexibility in care choices. Your living arrangements should be driven by need, not by what insurance will cover. "Look for products that provide maximum choice," says Rona Ba-

stone, a Ft. Lauderdale (Fla.) care manager.

Be sure to get a knowledgeable agent. Bad advice can cost a bundle. And make sure the insurer has solid financial backing. You can buy ratings from companies such as Weiss, A.M. Best (www.ambest.com), or Standard & Poor's (www.standardandpoors.com). Shop with a company rated A or better. Some names to look at: Travelers, John Hancock, Transamerica, UNUM, and Fortis. If you buy at 60, you'll need a company that's going to be around in 20 years.

Finally, shop around. A study conducted by W

Ratings shows that premiums can vary by as much as 30% for similar policies.

So what's the bottom line? The consensus among a half-dozen experts seems to be to consider a policy at 55 or 60. If you can afford it, get a minimum of five years' coverage, a generous inflation rider, and a deductible of 30 or 30 days. And make sure your policy pays for the widest choice of care options.

Thinking about how you'll be cared for when you can no longer feed yourself is no fun. Making plans for that day is as important as deciding whether to buy that condo on the lake.

The Cost of Long-Term Care Insurance

Here's what one carrier charges for some common options:

AGE	BENEFIT PERIOD	MONTHLY BENEFIT	WAITING PERIOD	HOME CARE*	INFLATION PROTECTION	ANNUAL PREMIUM**
BASIC PLAN						
45	3 yrs	\$3,000	90 days	50% prof. care	No	\$174.90
70	3 yrs	\$3,000	90 days	50% prof. care	No	\$1,130.40
MIDDLE-OF-THE-ROAD PLAN						
45	6 yrs	\$4,000	90 days	100% prof. care	Yes	\$650.80
70	6 yrs	\$4,000	90 days	100% prof. care	Yes	\$2,984.40
HIGH-END PLAN						
45	Lifetime	\$6,000	90 days	50% all care	Yes	\$1,543.20
70	Lifetime	\$6,000	90 days	50% all care	Yes	\$8,042.40

*Professional care plans pay only for nurses or home health aides. An all-care plan provides payments to family members who assist in the care of a beneficiary. **Representative rates; actual costs will depend on your carrier, health, and other factors.

DATA: UNUM CORP.

sure the full cost of a nursing home, especially if you have a pension," she says.

■ **Elimination period.** This is insurancepeak for the deductible—how long you are willing to pay out-of-pocket before your coverage kicks in. Policies range from zero days—or first-dollar coverage—to 90 or 100 days. You can save on premiums by self-insuring for the first three months. But most planners suggest 30 days.

■ **Inflation.** If you're going to buy before you are 75, get an inflation rider. Most policies offer escalators based on either 5% simple or 5% compound inflation. With costs rising so quickly,

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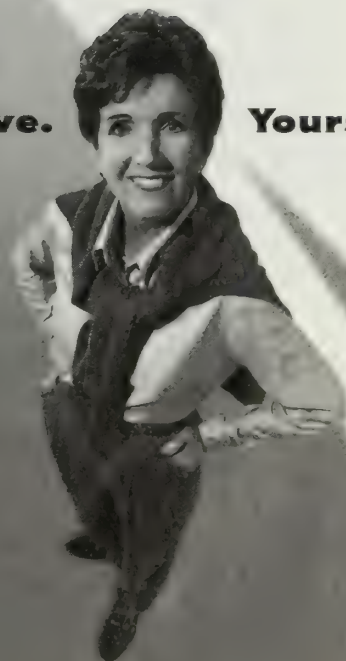
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Where to Find a Helping Hand

The many resources you can call on to avoid pitfalls in choosing an "assisted-living" facility

BY JOAN OLECK

HOW TO RETIRE

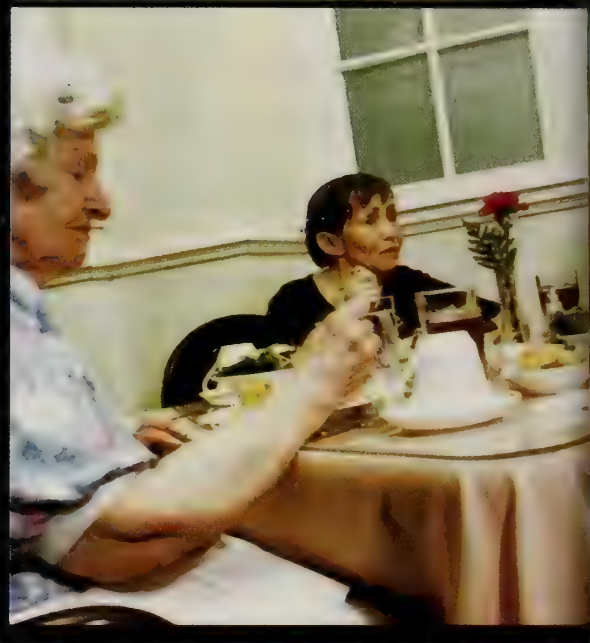
He was the one who had read her bedtime stories, taught her to ride a bike, and left tooth-fairy money under her pillow. So now that her father was 87, widowed, and losing his memory, Judy Balch of Houston wanted to do the right thing. Dad couldn't live alone, and he was too healthy for a nursing home, she reckoned. So, over a week in May, Balch and her husband explored four assisted-living facilities (ALFs) that provide housing as well as personal and medical services for the aging. After touring the grounds, quizzing residents, and sampling cuisines, the family settled on a top-tier, \$2,800-a-month complex.

Two months later, Judy Balch reports that her father is happy in his new home, though not all consumers are as fortunate. The assisted-living industry is booming as an aging America's quest for new housing options sends folks searching for everything from residences offering minimal services to those with nursing homes attached (table, page 134). But the search can be fraught with pitfalls. A recent General Accounting Office report found that, of 60 assisted-living contracts it examined, 20 contained "language that is unclear or misleading."

EXPELLED. The stickiest issue? The reasons a resident can be tossed out are often vague or not mentioned at all. A facility might discharge residents who fall behind on payments or whose health deteriorates dramatically. So make sure all the conditions are spelled out in writing before you sign. Half the contracts the GAO saw did not even mention discharge. The point: to mis-

lead consumers into believing they can live out their years in peace. "Aging in place is more a promise than reality," says Rhonda Buckner, director of the Consumer Consortium on Assisted Living (CCAL).

In actuality, some facilities—and some state regulations—force residents out once their health deteriorates. It's important, therefore, to put the reasons for discharge at the top of the list when reviewing an assisted-living contract. "A facility must say to the person who is shopping for a home: 'This is what we are, and we can take care of you to this point,'" says Karen Wayne, president of the Assisted Living Federation of





BUSY DAYS

At Prospect Park Residence in Brooklyn, N. Y. (clockwise from above): Morning coffee in one resident's apartment, at a sing-along, gardening on the roof, in the dining room



nerica (ALFA), the industry trade group. "But er that, you will have to move."

Trouble is, you may not even be able to see a contract until the last minute. The GAO found that of 622 facilities surveyed in four states, only 65% provided a contract prior to the admission decision, and then only if asked. About 1% provide no contract at all—and no laws require them to.

The GAO criticisms didn't end there. The agency cited one Florida contract that made a fuzzy promise to "meet your needs" as an illness progressed. The agreement then specified "changes in physical or mental condition" as rea-

sons for immediate discharge. The GAO further found that 27% of the facilities it surveyed had been cited for five or more problems related to quality-of-care or consumer-protection issues, ranging from poor hygiene to failing to notify a doctor when a resident fell.

OMBUDSMAN. Wayne calls the GAO report a "wake-up call." She acknowledges "the problems out there" and advises consumers to get details on the services, such as transportation and health care, included in the base fee and those that are considered extras.

The government is taking notice. The Senate Special Committee on Aging has asked the na-



KEEPING FIT: At morning exercise class

tion's 50 governors for details about their states' consumer protections for assisted living. And more states are regulating admissions agreements.

If you're on the consumer end of a contract worth hundreds of thousands of dollars, however, you need help now. A good starting point is the federal govern-

ment's Long-Term Care Ombudsman program, which can be reached via the Elder Care Locator (800 677-1116). With volunteers in every state, the program puts consumers in touch with agencies that can help them find ALFs—or resolve complaints against them. Checklists containing questions to ask when reviewing complexes are available from CCAL (703 841-2333; www.ccal.org) ALFA (703 691-8100; www.alfa.org), and the American Health Care Assn.'s National Center for Assisted Living (800 555-9414; www.ncal.org). The American Association of Retired Persons (202 434-2277; www.aarp.org) will offer *Assisted Living: Weighing the Options* this fall. Some guidelines:

■ *Do a self-assessment.* You'll need to evaluate your physical, financial, and lifestyle needs, or those of your parent. If Alzheimer's runs in your family, for example, you'll need an ALF with a special unit to treat such patients. A private geriatric-care manager can also help you sort through the issues. The National Association of Professional Geriatric Care Managers (520 881-8008) offers referrals.

■ *Choose among options.* Do you want to rent or buy? Must a nursing home be on the premises? ALFA materials explain the various configurations and list member facilities. Once you've zeroed in on a complex, make sure it's licensed, usually by your state's health department. Ask for the latest inspection report and the contract (sometimes called "a resident agreement"). Spend a night on the premises if possible. Call your state's department on aging to check the facility's record. Then hire an elder-care lawyer for help.

■ *Compare fees.* Upscale, freestanding assisted-living facilities charge rents of \$2,000 to \$6,000 with different service plans. Continuing care residential communities, offering a "life estate" in an apartment, can charge \$20,000 to \$50,000 upfront and do not let you pass on the place to your heirs. Be wary of surprise fees for ser-

vices you thought were included. Ask the staff: you're temporarily hospitalized, what fees will still apply? How much notice is given on fee increases?

■ *Check personal services.* Ask exactly how a facility will care for you should confusion, dementia, or incontinence develop. Will a doctor or health-care expert do an assessment? Is there a nurse on staff? Make sure the facility prepares a written care plan. Learn how prescriptions are filled and administered. Are staff-to-resident ratios adequate? How often are rooms cleaned?

■ *Clarify reasons for discharge.* Is an appeal possible? What kind of notice is given? "Consumers are assured they'll never have to move again," says Buckner of CCAL. "Then you go into the hospital—and lo and behold, you can't come back."

■ *Gauge the balance between independence and safety.* How does the facility handle residents' requests to pursue activities that threaten their health or safety? Is a "negotiated risk" agreement offered? For example, if your father has

The Language of Assisted Living

The term "assisted living" is often used generically to describe several tiers of senior living. But the industry typically adheres to these definitions:

INDEPENDENT LIVING A community of seniors in their own apartments with no personal services.

CONGREGATE CARE Offers rental apartments, a communal dining room, and limited personal services.

FREESTANDING ASSISTED LIVING Includes rental apartments for as much as \$6,000 a month, a dining room serving all three meals, an on-site nurse, and assistance with personal needs such as bathing and medications.

CONTINUING CARE RETIREMENT COMMUNITY Allows residents to age in place by including independent living, skilled nursing, and a nursing home on one campus. Up-front fee ranges from \$20,000 to \$50,000.

high blood pressure but insists on salty foods such an agreement would let him assume liability. Also get the lowdown on locks, call bells monitoring, and nonskid floors.

■ *Check the owner-corporation's financial viability.* If the company is public, examine the developer's Securities & Exchange Commission statements to make sure it is debt-free and has adequate working capital. A financial expert can determine the facility's "absorption rate," or how long it takes to fill the complex compared with the industry average, and how leveraged it might be. Ask also about manager and staff turnover, and training. If need be, contact your ombudsman and ask about the facility's grievance procedures.

Finally, visit your aging parent often. It's not only the right thing to do but it'll keep the staff on their toes.

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HEWLETT
PACKARD

A Design for Senior Living

Homes that let you grow old comfortably are here

BY MARY C. HICKEY

DeLoma Foster of Greenville, S.C., has seen the future, and she wants to be prepared. Foster, 69, has osteoporosis, just as her mother did. Although she's not having difficulty now, she knows the debilitating bone condition eventually could make it difficult, if not impossible, to navigate steep stairs, cramped bathrooms, and narrow doorways. So two years ago, she and her husband Clyde, a 72-year-old retired textile executive, moved into a novel type of home—one that can comfortably accommodate them no matter what disabilities old age may bring.

HOW TO RETIRE

Called a "universal design home," their residence is on the cutting edge of an architectural concept an aging population may well embrace. The only house of its kind in the neighborhood, it has wide doors, pull-out cabinet shelves, easy-to-reach electrical switches, and dozens of other features useful for the elderly or disabled. Yet they're incorporated into the design so unobtrusively that nothing about the home screams "elderly person lives here."

STAYING PUT. Apart from aesthetics, universal design is appealing because it allows people to stay in their homes even as they grow frail. "The overwhelming majority of people would prefer to grow old in their own homes in their own communities," says Jon Pynoos, a gerontologist at the University of Southern California in Los Angeles.

The building industry is coming around to the concept. Building suppliers now can offer every-

thing from lever door handles to faucets that turn on automatically when you place your hand beneath the spigot. Reaching so far is creating the biggest demand for these products.

"We're usually called in after a crisis, like when someone has had a stroke or developed severe arthritis,"

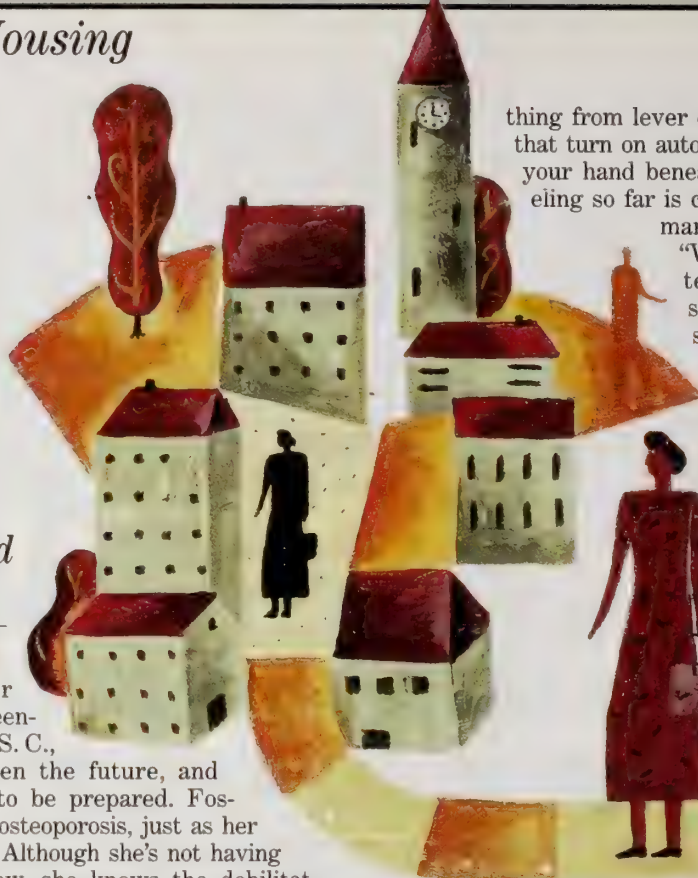
Louis Tenenbaum, president of A Remodeling, a Tomac (Md.) company that designs retrofits houses increasingly, building universal design homes from scratch, which says generally less than completely retrofitting a house.

Meanwhile, Wylliesburg, Cardinal H recently unveiled modular univer-

design homes in the \$120,000 to \$160,000 range. Philip Stephen Cos. in St. Paul, Minn., has six universal design homes in the South ranging from a 1,240-square-foot ranch in Georgia to a S.C., that sold for \$90,000 to the 2,200-square-foot home the Fosters bought for \$190,000. The company also sells blueprints to builders around the country. President Phil Dommer estimates that universal design adds 3% to 4% to construction costs, but he expects the gap to shrink.

To boost demand, builders are marketing families of all ages. In Cincinnati, Aml Homes' sales material stresses that the hallways of its \$300,000-to-\$400,000 homes not only accommodate walkers and wheelchairs but also make it easier "to carry bags of groceries and other bulky items."

This new setup suits the Fosters just fine. Unlike peers who are moving into continuing care communities, they want to stay where they have always lived, near their three children and around people of all ages. They now have a home that can accommodate a wheelchair, even has a room for a nurse, if the need arises. "We hope to be able to live here for the rest of our lives," says DeLoma Foster—in comfort with all the touches they need to ease their daily tasks.



The Age-Friendly House

FLOOR PLAN

- Single story
- No steps
- Gently graded walkways
- Extra-wide doors and hallways

ACCESSORIES

- Lever door handles
- Outlets and fuse boxes at central height
- Height-adjustable closet rods

BATHROOMS

- Grab-bars in tub
- Handheld showerheads
- Lever- or pedal-controlled faucets
- Skid-proof tile

KITCHEN

- Side-by-side refrigerator/freezer
- Cabinets with pull-out shelves
- Lever or pedal faucet

Are you Obsessed?

Do you multi-task in the shower?

Do you have to know everything first,
or not sooner?

Do you check your e-mail and voicemail
while you read your snail mail?

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NOT YOUR GRANDFATHER'S RETIREMENT

BY MARY C. HICKEY

Twenty years ago, as a young newspaper reporter in Broward County, Fla., I was assigned to cover the massive retirement communities sprouting up like saw grass on the edge of the Everglades. I soon made a sad discovery: The Sunbelt paradigm for aging—retirement as an endless vacation—didn't deliver as golden a life as promised.

The age-segregated lifestyle struck me as a depressing, indeed wasteful, way to grow old. My grandmother had

searchers are starting to document "outmigration" as older people, typically ailing or widowed, return home.

To be sure, affluent elders are still flocking to new communities. But now these residences are sprouting up close to home. Del Webb, who has built retirement complexes in Arizona and California, has opened an inaptly named Sun City in Huntley, Ill., a Chicago suburb. "We're finding that a growing population of older people want to remain closer to family and friends," says Dave Schreiner, Del Webb's vice-president.

NEW TRENDS. What's more, many are seeking to spend their later years with younger people. The American Association of Retired People (AARP) reports intergenerational programs such as children's day-care centers in senior housing facilities that tap the residents as staff. Gerontologists cite an emerging trend of retirees moving to urban areas, drawn by public transportation, cultural facilities, and neighbors who are active and young. Some cutting-edge senior housing options are in age-integrated settings. Last year, CareMatrix, which runs 44 assisted living facilities and other senior residences nationwide, opened a 168-apartment complex for active retirees in a mixed-age subdivision in Rye Brook, N. Y. Experts say we'll see lots more of the same.

Looking ahead, the trend away from retirement-dominated Sunbelt destinations should continue.

For one thing, the traditional idea of retirement may no longer make sense: One AARP study found that 80% of baby boomers believe they will work during their retirement years, either for enjoyment or to come. Today, just 12% of people over 65 are in the workforce. Besides, places mockingly known as "heaven's waiting room" won't appeal to a group that sees itself as forever young. "Boomer retirement will not be about canasta games and early-bird specials,"

says Norman Sherman, managing director of Senior Network, a market research firm. "We think of those as things old people do, not us."

I thought of South Florida recently when I read *Another Country: Navigating the Emotional Terrain of Our Elders* (Riverhead Books, \$24.95). The author, Mary Pipher, notes that an age-phobic, age-segregated society makes old Americans feel isolated and disconnected. It's hard to imagine that the gigantic generation of trendsetting boomers won't rewrite the rules of this stage of life, too.

Hickey writes about family issues



A society
segregated by
age makes the
elderly feel
isolated

lived with our family throughout my childhood, and she added a wonderful dimension to our lives, as we did to hers. Old people surrounded solely by other old people seemed grim. I sensed many South Florida seniors felt the

same. They were starved for youthful company, chatting as long as I'd listen about grandchildren they seldom saw.

I left Florida in the mid-1980s, but over the years I've watched the evolution of Sunbelt retirement. Many so-called active retirement communities have become populated by the old-old, who need services far beyond golf or bingo. Long-distance caretaking has imposed an exhausting burden on many adult children, while business has boomed for geriatric-care managers who look after the elderly when their families can't or won't. Indeed, the luster of a Sunbelt retirement has dimmed, and re-

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Sometimes you forget the bread.
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Doctor's Orders

Bill Bernstein wants to keep your portfolio healthy



BY ROBERT BARKER

With his homemade Web site, Bernstein is a guru to Internet-powered investors who don't want to depend on Wall Street

In this country today, investment advice is as tough to find as a can of Coke. Intelligent investment advice, that's scarcer. And intelligent, disinterested advice? That explains why I've flown 3,343 miles and now find myself in a rental car, climbing a steep, twisting road at the misty east edge of Coos Bay, Ore. Suddenly, a fawn flashes across my path, stopping me short: Could I be any farther from Wall Street?

How far starts to come clear at the top of the driveway. There, Bill Bernstein waits to welcome me into his home. Scraggly of beard, mischievous, and a bit abrupt, Bernstein is little known. But that's changing, and the sooner you get to know him, the better off your retirement portfolio is likely to be.

This guy has spent years studying how to invest for himself, and he relishes sharing what he's learned. In three years since erecting his homemade Web site, www.efficientfrontier.com, Bernstein has become guru to a peculiarly '90s group: well-educated, Internet-powered people intent on investing well—and with minimal "help" from professional Wall Street. "You make your own financial decisions," he tells me shortly after we meet. "You don't depend on stockbrokers."

Bernstein's top draw is his downloadable, 187-page book, *The Intelligent Asset Allocator: Portfolio Theory for the Small Investor*. It's a scholarly but engaging and helpful guide to spreading assets

HOW TO RETIRE

among index funds to balance risk with reward. He also publishes an online journal, *Efficient Frontier*, with such articles as "Roll Your Own," a review of personal-portfolio software. And he seems daily to fire off E-mails aimed at sundry investing conundrums. In June, he hit both fund manager James O'Shaughnessy,

author of the bestseller *What Works on Street*, and The Motley Fool Web site for use of statistics.

"He's either brilliant, or close to brilliant," says Steve Dunn, a University of Chicago and Southern California attorney who met Bernstein on a mutual fund message board. "His articles are the highest quality thing on finance the Net." John Rekenhaller, Morningstar search chief, confesses: "I go home and tell my wife sometimes, 'I wonder if he doesn't know more than me.' It's humbling." Why? Because what's full-time work for him is to Bernstein's hobby. Most times, he is William J. Bernstein, M.D. "We call him 'fastest neurologist in the West,'" says medical partner Dr. Linda B. "But he doesn't miss much."

APT PUPIL. Once I knew that, I had to know more. Bernstein, it turns out, got a head start on the rest of us amid an admittedly not-so-suburban Philadelphia youth: His dad and grandfather talked finance with him, and by high school he was reading Harry Markowitz, Nobel laureate who labeled a portfolio's op-



BERNSTEIN: "Shifting your allocation is a recipe for disaster"

I can do without doubters.

But I cannot tolerate repeating them.

I can grow.

because I've already asked the questions.

I can find buried treasure.

I work for J.P. Morgan.

JPMorgan johnrhea@jpmorgan.com (investment banking)

[illegible]

risk-reward balance the "efficient frontier."

At college and graduate school, he studied chemistry. After speeding through a PhD, he entered med school, and by 1980 he set up in Oregon as the lone neurologist on a long stretch of coast. Doctoring brought cash flow, and cash brought Bernstein back to finance. He plunged into the academic literature and studied statistics, all in hope of pursuing his personal investments scientifically. Many pros dismiss that approach as woolly-headed. "This business is much more of an art form than a science," says Jeffrey Applegate, chief U.S. strategist at Lehman Brothers.

But Bernstein sees that attitude as so much "mojo magic" dressed in a \$2,000 suit. Instead, Bernstein set out to get hard numbers, past returns of every asset and sub-asset—bonds, stocks, foreign stocks, small foreign stocks, and so on. "I started begging, borrowing, and stealing data," he says. "I called Nomura for small-stock data on Japanese stocks. I got some on small U.K. stocks from Hoare Govett. I just began collecting data from wherever I could and began looking at asset allocation and figuring out what was efficient."

It took years, but by 1995 he'd learned enough to fill a book. You may already suspect the conclusions he drew—that stockpicking inevitably



Bernstein has succumbed to a new temptation: managing money

The reason, he notes, is that perfect allocation is knowable hindsight. Better to keep a portfolio on its originally target than to try calling market "Constantly shifting your position," he writes, "is a real disaster."

Bernstein sent his first edition of *Intelligent Asset Allocator* to more than 30 publishers. "I got rejections from four or five. Two said they were very good, but you're not a professional. Just then, though, something happened: Internet service reached Coos Bay. At a local college, Bernstein studied HTML, the software language needed to create a website, and while vacationing in Australia that summer, he designed one on a laptop. On Aug. 25, it reached cyberspace.

"It's astonishing how fast the world found me," he says. The book gets 150 to 200 hits a day—

ing next to Motley Fool, but plenty to keep Bernstein busy in his den emitting midnight emails. Half the users are in finance, the other half scientists who enjoy his use of data. There are IBMers itching to diversify away from Blue stock. Everyone's allocation may differ, but long-term savers can't go far wrong with a simple 60%-stock, 40%-bond mix, among four index funds (table).

Bernstein's advice is solicited enough that he has succumbed to a new temptation: managing other people's money. In 1997, for example, he became partner with a Connecticut adviser, S. Sharin. They now run up to \$5 million. Even with the highest fees—from 0.5% of assets and falling to 0.2%—and the effort to solve to keep a short client list, this might mean serious enough perhaps to make Bernstein as much Wall Street as country doctor. The possibility stops him short: "I hadn't thought about that once, I've become the enemy."

Later, when I shared Bernstein's plan with Jim O'Shaughnessy, the fund manager B

stein skewered recently, he burst out laughing. "It's real easy to throw bricks from the side. It's a completely other thing to be a real money manager," he said. I'm betting Bernstein will be well by his investors. But in this much, at least, O'Shaughnessy is right: The education of Bernstein has only just begun.

For a Q&A with Bernstein, go to www.businessweek.com/investor/ or to AOL, keyword: *Daily*.

Dr. Bernstein's Portfolio Prescription

Here's how Bill Bernstein would allocate assets in a basic long-term retirement account for a saver with medium risk tolerance:

ASSET	CONVENTIONAL ALLOCATION	HIS PREFERRED ALLOCATION	APPROPRIATE FUND/ SYMBOL
LARGE U.S. STOCKS	36%	20%	Vanguard 500 Index/VFINX
SMALL U.S. STOCKS	12	20	Vanguard Small-Cap Index/NAESX
FOREIGN STOCKS	12	20	Vanguard Total International Stock Index/VGTSX
BONDS	40	40	Vanguard Total Bond Market Index/VBMFX

DATA: WILLIAM J. BERNSTEIN

fails to beat the market, that keeping costs low is crucial, and, above all, that asset allocation determines most of a portfolio's return. Even if you dispute all that, Bernstein uses statistics and such reader-friendly devices as imaginary Uncle Fred so persuasively, that you won't buy another actively run fund without pausing first.

Especially helpful is his thinking on rebalancing a portfolio: "Sticking by your asset allocation is more important than picking the 'right' one."

QUESTIONS? COMMENTS? E-mail barkerportfolio@businessweek.com or fax (407) 728-1711

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THE CABLETRON BUZZ



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The low-priced stock of Cabletron Systems (CS) is finally getting attention on the Street: It's up 49% so far this year, to 12%. In early June, it hit nearly 17—a 52-week high.

Two things are behind the new awareness of Cabletron, a provider of intelligent hubs and switching products for networking and Ethernet systems. Some players note that the sum of Cabletron's parts is greater than the current price. More tantalizing: Takeover buzz is running high.

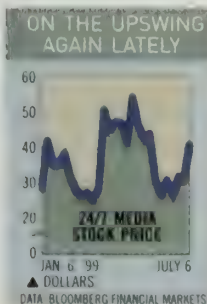
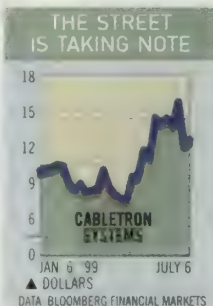
There have been takeover rumors before. But this time, a global telecom giant is considering buying Cabletron, say several pros who claim to be in the know. "There are several potential buyers" intently looking at Cabletron, says Jim Marquez, who heads Bayou Securities in Stamford, Conn. Among them: Italy's Alcatel, Germany's Siemens, and Canada's Northern Telecom, according to Marquez, who has been accumulating Cabletron shares.

Analyst Chris Stix of SC Cowen, who has a buy rating on the stock, says that "as one of the last large free-standing enterprise networking players," Cabletron could be attractive to a telecom-equipment supplier. Based on breakup value, he says, the stock is worth at least 20 a share.

Among Cabletron's assets is the Layer 3 switch business, which could be worth up to \$25 a share, figures Stix. Cabletron's cash hoard totals \$500 million, or \$2 a share. Another division, SPECTRUM, maker of network software products, may be worth a further \$3, says Stix. Cabletron says it may make SPECTRUM a stand-alone company. The betting: Cabletron will take it public.

Analyst Al Tobia of Bank of America Securities, who rates Cabletron a buy, expects the company will earn 25¢ a share in calendar 1999 and 79¢ in 2000. Cabletron declined comment as a matter of policy.

ROUND-THE-CLOCK INTEREST IN 24/7?



Online advertising is hot, and so are the stocks of companies that bring them to the Internet. One that delivers ads to more than 2,500 Web sites is 24/7 Media (TFSM), whose stock has been as volatile as any mercurial Internet outfit. Of late, 24/7, which dropped from nearly 70 a share in mid-April to 24 in mid-June, is again on the upswing: It went above 40 in early July. Some pros think the stock is headed past 70: They believe 24/7 is

bound to be acquired by DoubleClick, the leader in advertising Internet solutions.

DoubleClick recently agreed to acquire Abacus Direct—to broaden its product line and gain data on consumer purchasing. And recently, DoubleClick has been rumored to be after Internet ad-software vendor NetGravity. "But for DoubleClick to have the expertise in providing ad solutions to all forms of media—cable, TV, and radio—it would need the deep experience and resources of 24/7," says one Internet investor. Among 24/7's key clients: Amazon.com, Netscape, Disney, and Dell Computer.

Analyst Rudy Hokanson of CIBC Oppenheimer says 24/7's competitive advantage stems from its having management with wide media expertise, its ability to reach large number of Internet users, and its proprietary database that could "revolutionize Internet marketing and advertising." He figures that 24/7's estimated 1999 revenue of \$64.5 million will jump to \$127 million in 2000, compared with \$19.9 million in 1998. His target for the stock: 80. David Moore, CEO of 24/7, says he wouldn't be surprised if DoubleClick were interested, but insists 24/7 intends to be a preeminent online ad-solutions company.

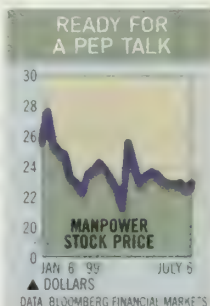
MANPOWER IS ON THE MARCH OVERSEAS

Investment manager Tony Spare thinks he has found a "cheap way" to play the prospective rebound in the economies of Britain, France, and Japan. No, he isn't buying into the banks or financial services. He has been accumulating shares of Manpower (MAN), the world's largest temporary employment company.

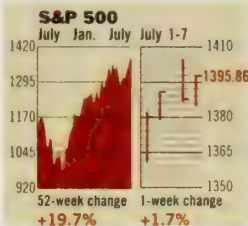
Spare, who heads the San Francisco investment firm Spare, Kaplan, Bischel & Associates, is convinced that, starting next year, those economies are coming back strongly—and will provide the key to renewed growth for Manpower, which derives 73% of its revenues overseas.

Its stock has been on the ropes this year, falling to 22 a share, down from 30 last summer. The company, which provides employment annually to about 1.6 million people in 43 countries, has soured the Street with disappointing earnings in the past three quarters. But a new management recently installed, led by new CEO Jeff Joerres, has encouraged analysts. "It gives us more confidence that Manpower is on the way back," says Jeffrey Silber of investment firm Gerard Klauer Mattison.

Spare says "neglected" Manpower is the "ideal stock to buy" into the recovery in Europe and Japan. Manpower will beat consensus earnings estimates of \$1.85 a share for 2000, he says. He thinks it can make \$2 to \$2.50 a share. The stock, he says, should hit 40 this year.



STOCKS



COMMENTARY

Growing optimism about coming second-quarter profits pushed stocks upward. On July 7, the Dow industrials, the S&P 500, and the NASDAQ Composite all hit new highs—an impressive showing, given that long-term yields once again are back above 6%. Overseas markets zoomed as well. Hong Kong stocks gained 5.4%; London, 4.4%; and Frankfurt, 3.9%.

Data: Bloomberg Financial Markets

U.S. MARKETS

	July 7	Week	Year
Dow Jones Industrials	11,187.4	2.0	23.1
NASDAQ Composite	2743.1	2.1	43.8
NASDAQ 100	2340.7	1.9	73.9
S&P MidCap 400	418.1	0.3	14.1
S&P SmallCap 600	185.5	0.0	-3.7
S&P SuperComposite 1500	293.1	1.5	19.4

SECTORS

	July 7	Week	Year
S&P/BARRA Growth	784.9	1.8	27.4
S&P/BARRA Value	632.4	1.5	13.6
S&P Basic Materials	137.3	1.8	6.7
S&P Capital Goods	1044.2	1.5	19.4
S&P Energy	873.7	3.2	15.6
S&P Financials	147.9	1.6	3.6
S&P REIT	84.4	-1.2	-19.3
S&P Transportation	754.7	1.9	6.6
S&P Utilities	260.5	1.1	6.2
GSTI Internet	513.1	3.5	215.4
Morgan Stanley Cyclical	599.3	1.3	15.0
PSE Technology	610.3	1.7	73.8

BEST-PERFORMING GROUPS

	Last month %	Last 12 months %
Semiconductors	18.1	92.6
Specialty Chemicals	15.9	86.9
Defense Electronics	14.3	83.3
Communications Equip.	14.3	66.6
Personal Loans	14.0	61.8

GLOBAL MARKETS

	July 7	Week
S&P Euro Plus	1367.3	3.9
London (FT-SE 100)	6597.4	4.4
Frankfurt (DAX)	5588.5	3.9
Tokyo (NIKKEI 225)	17,958.9	2.4
Hong Kong (Hang Seng)	14,257.4	5.4
Toronto (TSE 300)	7172.0	2.3
Mexico City (IPC)	5931.2	1.7

FUNDAMENTALS

	July 6	Week ago
S&P 500 Dividend Yield	1.17 %	1.20 %
S&P 500 P/E Ratio (Trailing 12 mos.)	34.7	33.8
S&P 500 P/E Ratio (Next 12 mos.)*	24.8	24.6
First Call Earnings Surprise*	11.34 %	5.49 %

*First Call Corp.

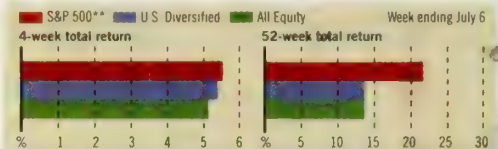
TECHNICAL INDICATORS

	July 6	Week ago
S&P 500 200-day average	1229.7	1222.7
Stocks above 200-day average	60.0 %	58.0 %
Options: Put/call ratio	0.40	0.49
Insiders: Vickers Sell/buy ratio	1.56	1.51

WORST-PERFORMING GROUPS

	Last month %	Last 12 months %
Pollution Control	-32.7	Manufactured Housing
Machine Tools	-20.8	Metal & Glass Containers
Hospital Management	-13.5	Apparel Manufacturing
Cosmetics	-11.3	Machine Tools
Household Products	-9.1	Toys

MUTUAL FUNDS



Data: Morningstar, Inc.

**Vanguard 500 Index fund

EQUITY FUND CATEGORIES

Leaders		Laggards	
Four-week total return	%	Four-week total return	%
Japan	14.7	Real Estate	-1.3
Pacific/Asia ex-Japan	13.4	Utilities	0.8
Technology	13.2	International Hybrid	2.3
Diversified Pacific/Asia	12.1	Domestic Hybrid	2.5
Diversified Emerging Mkts.	9.9	Mid-cap Value	2.6
Leaders		Laggards	
52-week total return	%	52-week total return	%
Pacific/Asia ex-Japan	73.4	Real Estate	-7.7
Technology	72.5	Precious Metals	-7.2
Japan	54.2	Latin America	-6.0
Diversified Pacific/Asia	52.6	Small-cap Value	-5.1
Communications	49.2	Europe	-4.5

INTEREST RATES

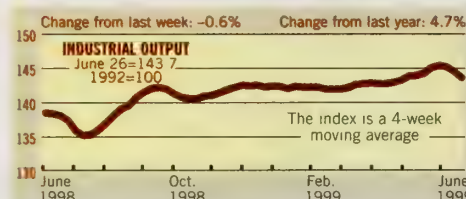
	July 7	Week ago	Year ago
KEY RATES			
MONEY MARKET FUNDS	4.53%	4.48%	5.11%
90-DAY TREASURY BILLS	4.64	4.78	5.07
1-YEAR TREASURY BILLS	5.01	5.07	5.32
10-YEAR TREASURY NOTES	5.88	5.81	5.43
30-YEAR TREASURY BONDS	6.05	5.98	5.62
30-YEAR FIXED MORTGAGE†	7.69	7.74	7.03

BLOOMBERG MUNI YIELD EQUIV

Taxable equivalent yields on AAA-rated, tax-exempt municipal bonds, assuming a 31% federal tax rate	
	10-yr. bond 30-yr. bond
GENERAL OBLIGATIONS	4.81% 5.11%
TAXABLE EQUIVALENT	6.97 7.80
INSURED REVENUE BONDS	4.95 5.62
TAXABLE EQUIVALENT	7.17 8.00

†BancQuote, Inc.

BW PRODUCTION INDEX



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The production index dropped further the week ending June 26. However, calculation of the four-week moving index edged up to 143.2, from 142.7 a seasonally adjusted basis, output steel, autos, trucks, lumber, and power all increased. Truck product particularly strong, helped by demand. Crude-oil refining and production, as well as rail-freight declined in the latest week.

THE WEEK AHEAD

RETAIL SALES *Wednesday, July 14, 8:30 a.m. EDT* ▶ Retail sales probably increased 0.2% in June, says the median forecast of economists surveyed by Standard & Poor's MMS, a division of The McGraw-Hill Companies. Excluding cars, sales likely rose 0.4%. In May, total retail buying jumped 1%, while nonauto sales increased 0.5%.

PRODUCER PRICE INDEX *Wednesday, July 14, 8:30 a.m. EDT* ▶ Producer prices of finished goods probably edged up just 0.1% in June, after a 0.2% increase in May. Excluding food and energy, core prices likely rose 0.1%, the same advance posted in May.

CONSUMER PRICE INDEX *Thursday, July 15, 8:30 a.m. EDT* ▶ The S&P MMS survey forecasts that consumer prices for all goods and services probably increased by a mild 0.1% in June after no change in May. Core consumer prices, which exclude food and energy costs, probably also grew just 0.1% in June, the same rise reported in May.

BUSINESS INVENTORIES *Thursday, July 15, 8:30 a.m. EDT* ▶ Inventories held at manufacturers, wholesalers, and retailers probably grew 0.2% in May, says the S&P MMS survey. Factories have already reported a 0.2% gain in their stock levels for the month. Business inventories grew 0.2% in April. Business

sales probably jumped about 0.9% in May after falling 0.1% in April.

INDUSTRIAL PRODUCTION *Friday, July 16, 9:15 a.m. EDT* ▶ The S&P MMS median forecast says that output at factories, mines and utilities probably increased 0.2% in June, on top of a 0.2% gain in May. The average operating rate likely slipped to 80.4%, from 80.5% in May.

BusinessWeek ONLINE

For more investment data and the components of the production index, visit www.businessweek.com.

Index to Companies

gives the starting page for a story or
a significant reference to a company.
Companies are indexed under their own names.
Companies listed only in tables are not included.

BDR) 147	Donaldson Lufkin & Jenrette 91
56	DoubleClick (DCLK) 147
ing 136	drkoop.com (KDOOP) 52
80	DuPont (E.I.) (DD) 52
ations (AERU) 50	E
ications (VOD) 50	Earthlink Network (ELNK) 77, 80
7	eBay (EBAY) 6, 92
(AC) 6	Eiffage Aquitaine (ELF) 60
AZN) 6, 19, 147	emachines 80
AOL) 52, 77, 80, 86,	Enocle 69
135	Enron (ENE) 92
1, 52, 92	Envisioning Group 12
ources Asia 63	E*Offering 91
ing 98	Equity Marketing (EMAK) 42
6	Ericsson (ERIC) 61
Securities 147	ESPN (DIS) 19, 40
de Paris 60	eToys (ETYS) 6
56	E*Trade (EGRP) 82, 84, 91
SC) 91, 98	Express Scripts 46
19	Exon (XON) 60
L) 55	F
50	Fidelity Brokerage Services 84
7	Fidelity Investments 84
69	Fieldcrest Cannon 43
ologies 69	Financial Engines 108
ental Technologies	Financial Planning Group 108
enca 52	First Union (FUT) 86
2	Ford (F) 48, 52, 63
60	Forrester Research (FORR) 82, 84
Hamman 56	Fox (NWS) 40
ms (CS) 147	Franklin Mutual Advisers 61
enca 44	Free-PC 80
s 136	G
DOC) 138	Gartner Group (IT) 86
7	Gateway 2000 (GTW) 47, 77
ch.com (MKTW) 82	General Motors (GM) 48, 63
tan (CMB) 86	Gerard Klauer Mattison 40, 77, 147
FR) 86	Gobi 80
60	Goldman Sachs (GS) 56, 91
mer 147	Gomez.com 84
) 80	Go Network (SEEK) 52
98	GoTo.com (GOTO) 6
(CSCO) 61	Grand Casinos (GND) 98
52, 56	H
m 6	Hambrecht & Quist (HQ) 91
12, 42	Hambrecht (W.R.) 91
uter (CPQ) 77, 80	Hart (Peter D.) Research 43
82	Hasbro (HAS) 42
ications 52	Hennes & Mauritz 96
First Boston 77	Hewlett-Packard (HP) 77, 80
field 20	Hilton Hotels (HLT) 98
56	Hoare Govett (AAN) 140
er 48	Honda (HMC) 48, 63
84	I
er (DELL) 77, 147	IBM (IBM) 77, 80, 86, 108, 140
IB) 138	idealab! 6
56	Individual Investor Online 92
91	Infoseek (SEEK) 40
	ING Baring Furan Selz (ING) 52
	Intel (INTC) 47, 82
	InterSQUID.com 80
	Intuit (INTU) 84, 108
	Investor 61
	IPO.com 91
	IPO Financial Network 91
	Indium World Communications
	(IRID) 92
	Islands of Adventure 40
	J
	Juniper Networks (JNPR) 91

KB Toys 42	K
Kmart (KRM) 19	Kadenburg Thalmann 80
L	Layer 3 147
Leaseway Transportation 98	Lehman Brothers (LEH) 140
Leas-Neus (RUK) 82	Liberty Media Group (LMGA) 92
Lifetime Planning Concepts 108	Long-Term Capital Management 52,
Long-Term Capital Management 52,	82
Lucastim 42	Lucent Technologies (LU) 61
M	
Macy's 42	Mainspring Communications 84
Mannesmann (MNSM) 56	Manpower (MAN) 147
Mattel (MAT) 42	McDonald's (MCD) 19
McGraw-Hill (MHP) 118	McGraw-Hill (MHP) 118
MCI WorldCom (WCOM) 50	Medtronic (MDT) 44
Mellon Private Asset	Management 122
Merck (MRK) 46	Merrill Lynch (MER) 52, 56, 84, 91,
Merrill Lynch (MER) 52, 56, 84, 91,	120
Metatech Applied Power Solutions 76	Micron Technology (MU) 77
Microsoft (MSFT) 6, 47, 77, 80, 150	MindSpring Enterprises (MSPG) 80
Mirage Resorts 98	Morgan Grenfell 56
Morgan (J. P.) (JPM) 42	Morgan Stanley Dean Witter
Morgan Stanley Dean Witter	(MWD) 56, 82
Morningstar 140	Motley Fool 82
Motorola (MOT) 16	Motorola (MOT) 16
MTV (VIA) 19	N
National Westminster Bank 56	NBC (GE) 40
NEC (GE) 40	NEC Direct 77
Neocnn 69	NetGravity (NETG) 147
NetScout (NETS) 147	Netscape Communications (AOL) 47,
Netscape Communications (AOL) 47,	147
News Corp. (NWS) 40, 82	NexTel Communications (NXTL) 50
NFL 40	Nike (NKE) 19, 96
Nintendo 19	Nintendo 19
Nokia (NOKA) 6, 61	Nomura Securities 140
Nortel Networks (NT) 61	Northern Telecom (NT) 147
Novell (NOVL) 47	O
OmniPoint (OMPT) 50	P
Paribas 60	Park Place Entertainment (PPE) 98
Park24 6	Pella 44
PepsiCo (PEP) 42	Pillowtex (PTX) 43
Pioneer Hi-Bred International	(PHB) 76
PowerShift Group 55	PowerTel (PTL) 50
Procter & Gamble (PG) 19	Procter & Gamble (PG) 19
Prodigy 80	Q
Qualcomm (QCOM) 16	

Regional Financial Associates 44	R
Roth (Crittenden) 91	Royal Dutch/Shell Group (RD) 60
S	
Salomon Smith Barney (G) 6, 40, 91	SAP (SAP) 6
SBC Communications (SBC) 50, 55	Schering-Plough (SGP) 46
Schwab (Charles) (SCH) 84, 91	Senior Network 138
SG Cowen Securities 147	Siemens 147
Societe Generale 60	Sony Pictures Entertainment
Sony Pictures Entertainment	(SNE) 19
Sotheby's (BID) 19	Spare Kaplan Bishel 147
Spectrum 147	SpotShop.com 77
Spring Engineering &	Manufacturing 44
Sprint (FON) 50	Standard & Poor's (MHP) 127
Standard & Poor's (MHP) 127	Standard & Poor's DRI (MHP) 48
Starwood Hotels & Resorts (HOT) 98	Stephen (Philip) 136
Strong Capital Management 126	T
Financial Services 108	TCA Cable 52
Texaco (TX) 60	TheStreet.com (TSCM) 82
Thomson 12	3Com (COMS) 16
Ticketmaster Online-CitySearch	(TMCS) 6
Tickets.com 6	Time Warner (TWX) 40
TotalFina 60	Toyota (TOYO) 48, 63
Transco Group 98	Travelers Insurance (C) 6
Tricon Global Restaurants (YUM) 42	T. Rowe Price (TROW) 122
Tupperware (TUP) 55	24/7 Media (TFSM) 147
U	
Universal Studios (VO) 40	USA Waste Services 52
V	
Vanguard Group 108	VivoRx 69
VLSI Research 76	VoiceStream Wireless 50
Volkswagen 56, 63	W
Wal-Mart Stores (WMT) 19	Walt Disney (DIS) 19, 40, 147
Warburg Dillon Read 56	Wasserstein Perella Securities 48
Waste Management (WM) 52	Wedbush Morgan Securities' E
InvestmentBank 91	Weiss (Thomas) Partners 91
Weiss Ratings 127	Wells Fargo (WFC) 86
West Group 12	West Publishing 12
Wit Capital (WTC) 91	Wolff (Rudolf) 52
X	
Xerox (XRX) 82	Y
Yahoo! (YHOO) 52, 86	Z
Zweig-DiMenna Partners 92	

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HOW THE NET IS CHANGING THE RULES

Happy birthday. The economic expansion is now 100 months old; six more months, and it will become the longest in U.S. history. But while its longevity gets all the attention, the expansion's most important characteristic may turn out to be its unusual quality. Driven by the kind of technological change that comes along once or twice in a century, this expansion is rewriting a lot of conventional economic wisdom. By now it's clear that higher productivity growth is altering old relationships among growth, employment, and inflation—and for the better. Anyone sticking solely to traditional economic verities these days is apt to miss the revolution.

Take profits. The standard argument is that profits are the key to success in any business. But investors have been rewarding Internet companies that show little profit but great potential for attracting viewers instead. The valuations for Net companies and new initial public offerings are crazy by conventional standards. Indeed, some argue that the Net is so frictionless—so cheap and easy to enter and therefore so competitive—that profits will always be scarce. After all, the airlines transformed the economy, and they have barely broken even over the decades. The Net could do the same.

We think not. There are already sizable profits being made on the Net, but they go to those with critical mass. America Online Inc. poured out nearly half a billion dollars on marketing and distributing AOL software before it made a profit. But that investment has paid off: An extraordinary amount of the time Americans spend on the Net is spent on AOL. With 17 million subscribers and advertisers ready to gain access to them, the company is earning real money—upward of \$100 million in 1999, according to analysts. And with a market value of \$125 billion—already one-quarter that of Microsoft Corp.—it has the wampum to grow even further. In short, AOL is beginning to evolve into a more “normal” company that can be evaluated through established financial criteria.

Bottom line, the Net is transforming some of the rules of business, but not all. While some stocks appear overvalued by conventional standards, they are rational by others. While going profits may appear foolish at first, building mass markets actually be more sensible. The only thing clear is that we are all living through a complex economic revolution, where standard operating procedures fail to guide. It's a wild ride, and we have to use it.

MAKE THOSE RETIREMENT PLANS SIMPLER

Summertime is the season when people start thinking about retirement. For aging boomers, warm weather, rounds of golf, games of tennis, a trip to Tuscany, maybe even visits to see the first crop of grandchildren—all whisper promises of a relaxed, fun-filled après-work life. Prerequisites are health and money. A lot of money. Pity that the government isn't making it as easy as it could be to build a nest egg.

The good news is that Washington has made available more than a dozen separate retirement plans for people to tuck away money, invest, and take part in the great American wealth machine (page 108). Unfortunately, each plan has its own rules on withdrawals and contributions. They are so complex and contradictory that they often leave people feeling confused and helpless. This is especially true of low-to-middle-income families who don't regularly use accountants and tax lawyers. There are 401(k)s, 403(b)s, IRAs, Roth IRAs, nondeductible IRAs, Keoghs, SEPs, SIMPLEs, annuities, medical savings accounts, and others. Add in President Clinton's USA Plan, which would supplement Social Security, and it's a turnover to millions.

Congress should act to simplify the myriad retirement plans to help people plan for their retirement. Right now, the rules for contributing to retirement plans vary according to phaseouts, dollar amounts, and estate purposes. The USA Plan alone has two distinct rules for contributions, depending on whether or not the money is matched by the government. Withdrawals from the various plans have

dozens of rules of their own. The permutations are enormous.

There are two ways to simplify retirement plans. One is for Congress to repeal the \$100 billion in annual tax breaks for retirement saving now on the books and just lower marginal tax rates. That would permit people to keep more of their money and invest it for the future. But that's probably too much to ask. Targeted tax breaks for children, education, and other purposes allow politicians to offer candy to constituents they are unlikely to give up the practice. Simplifying retirement plans is a good fallback. Congress could create a single super-program with one set of rules for contributions and one set of rules for withdrawals. Allow people to salt away \$10,000 free every year without exceptions. To add a bit of discipline, all withdrawals before retirement should be taxed at regular income-tax rates. Borrowing from retirement accounts for current consumption should be discouraged.

Wealth creation in America has been nothing short of spectacular in recent years. Increasingly, the U.S. is a nation of “haves” and “have mores.” The number of households with an annual income of more than \$100,000 and a net worth of \$500,000 or more is nearly 17 million, compared to 10 million in 1990. The number of millionaires has doubled to 1 million in the past decade. The “have mores” possess the resources to take care of their own retirement. The “haves” could use some help. The government is making their retirement planning much more complicated and confusing that it needs to be. It's time to change that.



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took them to places so unreal and so far out there, Steve thought,

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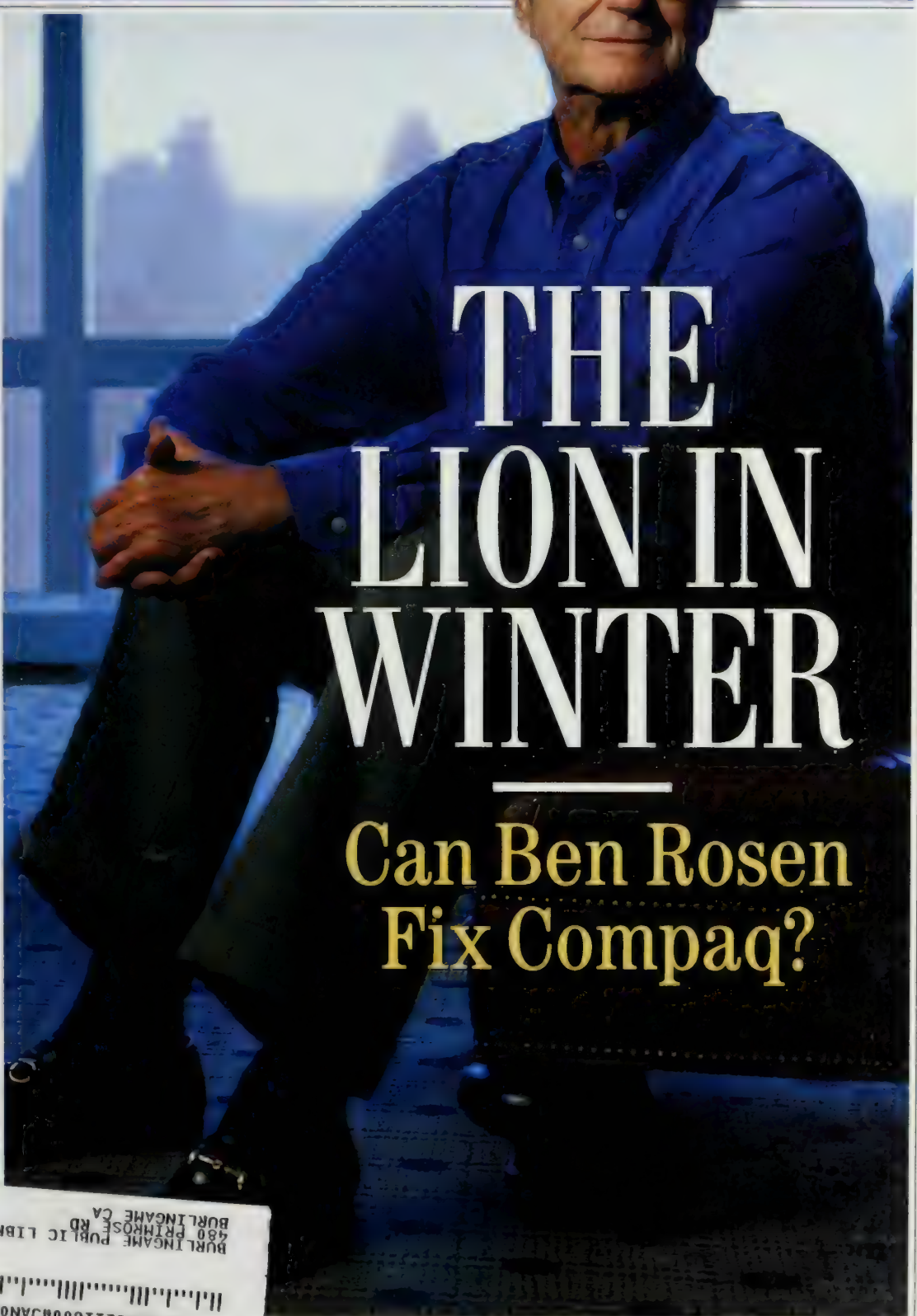
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Charles Schwab on investing

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your broker is
compensated."



"I'm a working mother," says Susan, "and I want to plan for a secure future. So it's important that I make the right investments now."

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What keeps you at Schwab?

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need without sales pressure. "They truly want to help people," as Susan says.

"The Investment Specialists are wonderful. They always answer my questions. One even gave Spencer a chocolate Easter bunny when we opened his account."

Any closing thoughts?

"I plan on investing with Schwab for the rest of my life," says Susan. "Spencer has a great deal of life ahead. I'm his mother, and I want the best for him."

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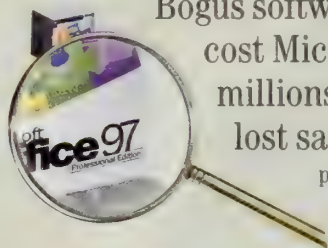
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Charles Schwab

EURO PIRATES

Bogus software
cost Microsoft
millions in
lost sales

page 90



BusinessWeek

JULY 26, 1999

COVER STORY
LION IN WINTER
Ben Rosen shows
polishing his game. Instead
tackling the top
job in techdom
Fixing Compaq



UAW DUSTUP
An organizing drive
turns ugly page 28



OVERHAUL
The Net is changing
how underwriter
business page 96

Cover Story

108 THE LION IN WINTER

Ben Rosen has shown an uncanny sense of how to cash in on technology. Will his Midas touch still work at Compaq?

116 A TALK WITH BEN ROSEN

News: Analysis & Commentary

26 TAIWAN: DIRE STRAITS AGAIN

Lee's risky two-China policy shift

28 THE UAW'S NEXT CAMPAIGN

DaimlerChrysler may well be its foe

30 COMMENTARY: THE BUDGET SURPLUS

Here's the game plan: Simplify taxes

32 CORPORATE BONDS VS. T-BILLS

Can companies replace Treasuries?

34 ARE T-BILLS Y2K INSURANCE?

Short-term Treasuries may be a bug cure

34 COMMENTARY: THE FED

Some red tape is worth keeping

36 A PROFIT GUSHER FOR BIG OIL?

Production cuts may send prices soaring

38 SYSTEMS-ON-A-CHIP

National Semiconductor's lonely crusade

39 FOR HOLLYWOOD, LESS IS MORE

Bigger box office with fewer films

40 IN BUSINESS THIS WEEK

International Business

44 INDONESIA: A POWER PLAY

The Army's Wiranto as kingmaker

46 SOUTH KOREA: MERGERS

The Hyundai-LG deal won't be copied

48 ARGENTINA: THE ECONOMY

Why investors got the jitters

50 INTERNATIONAL OUTLOOK

Why Syria's Assad may be ready to deal

Economic Analysis

20 ECONOMIC VIEWPOINT

22 ECONOMIC TRENDS

23 BUSINESS OUTLOOK

Government

43 WASHINGTON OUTLOOK

Rubin vs. Greenspan: The money factor

Marketing

54 MAD AVE: A STAR IS REBORN

Can Beers rekindle the glory days?

64 CLICK HERE FOR NET MARKET

Mad Ave has some online comes

Media

66 AN AMBITION AS BIG AS TEXAS

Tom Hicks is molding a media
the hard way

Science & Technology

71 DEVELOPMENTS TO WATCH

72 LYME DISEASE'S VEXING VACC

For some patients, LYMERIX's
could be as serious as the disease

Environment

74 HOT AIR IN THE POLLUTION DE

Emissions may not be rising

The Corporation

78 MARRIOTT'S VIEW OF DOWNTOWN

It's putting Courtyards in inn

82 WAL-MART FLEXES ITS CYBER

It's beefing up its Web site big

BusinessWeek ONLINE

www.businessweek.com
America Online: Keyword: BW



RENEWAL
Marriott is taking its
hometown page 78



E
ce
back
page 54



MUTUAL FUNDS
A crowd of
low-risk

os is moving to the
le list page 124

GHUT FINDS E-COMMERCE CASH
es out its back office operations

stries

CE: A DIESEL IN EVERY DRIVE?
el breed of engines sparks a boom

mation Technology

HOLOGY & YOU

no advance in digital cameras

SOFT VS. THE PIRATES

licated thieves haul in millions

nce

T: CHANGING DEALMAKING

writers rethink their practices

NG IN CYBERSPACE

Edshow grabs "important eyes"

ORE TRUSTS SPRING LEAKS

ourt rulings threaten them

IT TO SMALL CAPS?

gdu, the sector is sizzling

ts Business

MENTARY: WOMEN'S SOCCER

ourism helps the sport—why not?

Business Week

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A QUARTERLY REPORT ON ELECTRONIC BUSINESS



Cover Story

EB16 There's gold to be mined in those mountains of data

Strategies

EB32 How Weyerhaeuser opened the door to profits

Personalities

EB39 Halsey Minor sees CNET as a one-stop knowledge base for all things techie

Upstarts

EB44 Webvan: Grocery shopping online

EB52 Invasion of the E-Vikings

Net Worth

EB58 A flood of venture capital is hitting the Web big-time

Net Culture

EB64 Will E-tailing's giants stomp the small Netpreneur flat?

BusinessWeek Lifestyle

120 NEW WEAPONS AGAINST A KILLER
 Colon cancer treatment takes a big step forward

122 FISHING GOES HIGH TECH
 Space-age tackle for anglers

BusinessWeek Investor

124 GRADING THE FUNDS
 Our new midyear mutual funds update finds some new names on the A-list

127 WHERE 4.9% MAKES YOU A STAR
 ssga does well—for emerging markets

128 THE VALUE OF FOCUSING ON GROWTH

Gabelli Growth flourishes on large-caps

130 THE BARKER PORTFOLIO

Net banking is here, but has it arrived?

135 GENE MARCIAL: INSIDE WALL STREET

Features

6 UP FRONT

10 READERS REPORT

11 CORRECTIONS & CLARIFICATIONS

18 BOOKS

136 FIGURES OF THE WEEK

137 BUSINESS WEEK INDEX

138 EDITORIALS

Up Front

EDITED BY ROBERT McNATT

URBAN AFFAIRS

DRIVING AWAY THE NO-CREDIT BLUES

THE REVEREND JESSE JACKSON has helped persuade some financial heavyweights to buy \$37 million in auto loans made to inner-city consumers with bad credit ratings. BUSINESS WEEK has learned that a group including Bank of America, Citigroup, and Goldman Sachs has agreed to purchase the auto receivables collected by Detroit's Mel Farr Auto Group, a network of Midwest dealerships that is the largest black-owned company in the U.S. The deal is expected to close the week of July 19.

The program will initially serve customers in Detroit, Dayton, and Cincinnati. The high-risk buyers have to make weekly payments. And if they don't pay? Each car will have an innovative gizmo, made by Payment Protection Systems of San Diego,



JESSE: Pushing auto loans

dubbed the "on-time device." It lights up three days before payment is due. If payment is not received by 7 p.m. each Friday, customers won't get a special code needed to start their cars. Says Farr: "I want my money."

Farr said that Jackson's influence was key to winning over conservative bankers and financiers who first balked at the scheme. "Access to capital, that's what this is all about," says Jackson. *Roger O. Crockett*

SPORTS BIZ

RACE ON SUNDAY, SELL ON MONDAY

THE REVVING ENGINES OF Formula One, the world's most-watched motor sport, have become music to car manufacturers' ears. On July 11, DaimlerChrysler said it intends to take a 40% stake in the TAG McLaren Group, owners of the 1998 world-champion team. The deal is just the latest example of auto makers' accelerating investment in the sport.

In June, Ford bought the Stewart Racing Team for \$80 million. BMW said it will become the major sponsor of the famed Williams F1 team in 2000. And after an eight-



year absence, Honda said in May that it would become engine sponsor for the British American Racing Team, also in 2000. Even Toyota, never before in Formula One, says it is eyeing participation.

What's fueling the action? Auto makers are increasingly seeking the marketing edge and engineering knowhow Formula One yields. Martin Beck-Burridge, director of automotive studies at

Henley Management College, thinks that by 2004 five teams will be controlled by manufacturers, up from just two next year. Ferrari and Ford. Of America's Big Three, only General Motors is not yet in F1. A spokesman says that GM may rethink that policy. *Heidi Dawley*

TALK SHOW "This was not an accident. It was a crime was a homicide."

—Prosecutor Katherine Fernandez-Rundle, charging the maintenance company in the 1996 ValuJet crash with murder

I-WAY PATROL

PRIVACY IS IN THE EYE OF THE SURFER

PRIVACY ADVOCATES HAVE misgivings about Net freebie deals where users trade personal data, often about buying habits, for the likes of E-mail accounts or even PCs.

It seems users, however, don't mind the trade-off as long as they are told how their data will be used. Only 12% of 457 Net users surveyed by the non-profit research

Is accepting free products in return for personal information a violation of your privacy? **YES 12%**

Is this trade-off acceptable if you are told how the information will be used? **YES 86%**

DATA: PRIVACY & AMERICAN BUSINESS

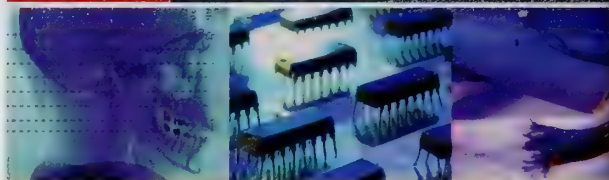
group Privacy & American Business—funded in part by banks and the credit industry—said that such programs violate their privacy. And 86% said participating in

them is O.K. if companies disclose how their info will be used. What's more, 59% might let their e-mail address be given to a line retailer.

Outspoken privacy defenders "don't have a ghost of an understanding of how a great number of Americans feel about" giving personal information, says survey director Alan Westin, a professor at Columbia. For users, says Westin, the attitude

"Tell me what you want me what you're going to do with it, and I'll decide." sites that clearly post privacy policies needn't worry, he says. *Dennis Bell*

THE LIST ADAPT OR DIE



What industries will be blindsided next by "disruptive technologies" like the Internet?

Clayton M. Christensen, the Harvard associate business professor who put the theory of disruptive technologies on the map with his book *The Innovator's*

AT RISK: Doctors, chip-makers, and B-schools

Dilemma, and tech futurists George Gilder note here some of the industries and companies living on borrowed time. Their predictions, in order of the ones most affected:

- 1. TELECOM** New optical networks will crater packet-switching systems. At risk: AT&T, with its business model based on voice tariffs.
- 2. FINANCIAL SERVICES** A stampede of online brokers, underwriters, and E-bankers is under way. Can Merrill Lynch adapt?
- 3. EDUCATION** Corporate universities with Internet teaching will undercut B-schools. Makes that Harvard MBA awfully expensive.
- 4. RETAILING** First, discounters pushed many big retailers out of hard goods. Then came online retailers. Sears has nowhere to go.
- 5. HEALTH CARE** Nurse practitioners using lower-cost diagnostic technologies will give doctors a run for the money.
- 6. MICROPROCESSORS** Low-end chips have already brought us the \$500 PC. Forthcoming systems-on-a-chip will put Intel on the hot seat.

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PUBLISHERS' ROW

FROM YACHT RACE TO BOOK RACE

IN A RACE WITH other books on the same subject, a major publisher is making an electronic end run to rush a sea-adventure book to readers. Martin Dugard's *Knockdown: A True Story of Sailors and the Sea*, won't be in bookstores until mid-September because of delays in securing rights to photos. But on July 19, Simon & Schuster's Pocket Books will bring out a photoless electronic version.

Readers can download it on Rocket eBook, SoftBook, or 3Com's PalmPilot handheld devices. *Knockdown*, about

six competitors killed in a 1998 Australian yacht race, can also be instantly printed and bound by outfits like Ingram Books Group's Lightning Print; these special orders are made through bookstores. Both modes will cost \$24.95, which is the price of the eventual hardback.

Pocket Books President Judith Curr figures E-Books and instant printing will help create buzz. It's needed, because a competing book on the tragedy came out June 28, Rob Mundle's *Fatal Storm: The Inside Story of the Sydney-Hobart Race*, published by McGraw-Hill, owner of BUSINESS WEEK. Still, *Knockdown's* E-publication will give it a jump on two other coming books on the disaster. *Larry Light*



PRODUCT PEEK

KILLING E. COLI WITH WATER POWER



THERE ARE SEVERAL WAYS TO kill *E. coli* bacteria, one of the most common causes of food poisoning. You can boil them to death, zap them with radiation, or treat them with chemicals. A small company in Kent, Wash., however, has developed an alternative: squeeze them to death.

Flow International, which

makes most of its money selling water-pressure cutting tools for the paper and mining industries, is selling a system that sterilizes food by subjecting it to water pressure of up to 100,000 pounds per square inch. Normal atmospheric pressure is 15 pounds per square inch, so almost nothing can survive such a sustained high-pressure blast of H₂O. Revenues from Flow's system are about \$10 million and projected to double annually until 2002, says the company.

Pressurizing costs about 30% more than heat treatment. But it doesn't affect food's taste, a big plus for companies such as Coca-Cola's Minute Maid unit, which has a deal with Flow. There are other benefits: Motivati Seafoods, a Louisiana seafood processor, uses the system to rid oysters of the nasty *Vibrio vulnificus* marine bacteria. The bonus? The pressure also shucks the shellfish. *Andrew Osterland*

DRAWN & QUARTERED



UNCOMMON MARKET

NOW THE FETA'S IN THE FIRE

GREEKS ARE IN A LATHER over the proper constitution of their tangy delicacy, feta cheese. The European Court of Justice has refused to ban other European cheese makers from using the feta name, even if it is made with cow's milk. That's anathema to Greeks, who say only sheep's milk can make real feta.

Nevertheless, the European Court ruled early this year that Greece has no right to monopolize the name, since other nations, including Bulgaria and Macedonia, also claim feta as part of their her-

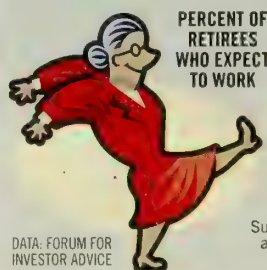
itage. The ruling could have larger implications. France wants to bring the U.S. before the World Trade Organization to stop the Americans from calling their fizzy wine champagne, a name the French want to keep on bubbly made in and around Reims. "The U.S. is in recognizing our label," says Sylvie Serra of the Institut National d'Appellation d'Origine.

But Greece doesn't own the rights to feta, so it may be to argue the French champagne. Meanwhile, the Greek Mission to the EU will appeal the court ruling and ask for legislation declaring that feta is "unique Greek." *William Ech*

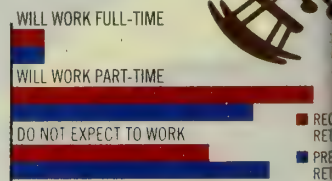


THE BIG PICTURE

WORK 'TIL YOU DROP Forget the golf-and-grand image of retirement. Most recent retirees say they expect to draw a paycheck. Only 11% of those with investable assets of \$50,000 or more worry about outliving their resources.



PERCENT OF RETIREES WHO EXPECT TO WORK



Survey of 500 people who retired in the past two years and 200 who plan to retire in the next two years. All have at least \$50,000 in investable assets.

FOOTNOTES Where Americans turn for spiritual guidance on financial decisions: prayer, **61%**; talks with clergy, **24%**



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COMPUWARE WOMEN 'SET THE RECORD STRAIGHT'

"As women in senior management at Compuware Corp., we were distressed and disturbed by your recent articles on Compuware and Pete Karmanos ("No way to treat a crisis" and "Keeping an investigation on the right track," People, July 5). While it would be inappropriate for us to address the specifics you cited, suffice it to say that your description of the situation was incomplete, at best.

What is most important to us, however, is to set the record straight as to the reality of being female at Compuware Corp. As one example, there are currently four women on Compuware's executive committee, and two on the board of directors. We challenge you to find another top software company that can match these percentages in top management. Of those four women on the executive committee, all were promoted from within the company. If there's a glass ceiling at Compuware, we've yet to encounter it.

We have all worked with Pete Karmanos on a near daily basis. Can he be demanding at times? Certainly. There isn't a successful business leader alive who isn't. But we can say two things with absolute certainty: First, we have not witnessed or personally experienced anything that could be viewed as sexist behavior, let alone sexual harassment, in our dealings with Pete. And second, all of us are smarter, better businesspeople because of the experience of working with him.

Compuware is an outstanding company, in large part because of Pete and the people he has hired, encouraged, and promoted. Both the company and Pete deserve more balanced, informed treatment than what your publication has portrayed.

Patricia Bennett, Sales Director
 Donna Debrodt, Vice-President,
 Corporate Marketing
 Laura Fournier, Chief Financial Officer
 Chris Galloway, Vice-President,

Testing and Implement
 Mary Hepler, Vice-Pre
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 Karen Sosnick, General Ma
 Fault Management Pro
 Jennie Zamberlan, Vice-Pres
 Compuware Sol
 Compuware
 Farmington Hills,

BAN ALL GUNS FOR ALL KIDS

Thank you for your article describing the gun industry's disturbing practice of marketing guns to young people ("Sonny get your gun," Up Front 5). If we are serious about keeping out of the hands of children, we find out how gunmakers are marketing to kids and eventually put a stop. That is why I authored legislation require such a study.

The article contained one inaccurate which I must correct. Although federal law does prohibit individuals under 18 from buying guns and those under 21 from buying handguns, this law applies only to purchases from gun dealers which primarily occur in gun stores. For all other purchases—from licensed vendors in gun shows, at markets, and in private sales—individuals under 18 can buy anything except handguns.

This means that someone under 18 can walk into a gun show or a flea market and buy a semi-automatic assault weapon, a shotgun, or a rifle. That is why I am also sponsoring legislation that would prohibit anyone under age 18 from buying any gun.

Barbara Boxer (D-Calif.)
 U.S. Senator
 Washington

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LECTIONS & CLARIFICATIONS

"Dragons Bulk Up" (Information Technology, some editions, July 19) should have stated that NEC Corp. was the world's No. 2 PC device maker in 1997, not the world's No. 2 chipmaker.

"Lowering the Secrets of the CPI" (Business Week Investor, July 12) erroneously asserted that the consumer price index does not allow for consumers' substitution of one good for another in the same category. In July 1999, the CPI was modified to capture such substitutions.

BUSINESS WEEK Global 1000 Country tables for the United States (July 19) show sales figure for Delphi Automotive should have been \$28.479 billion, the correct asset figure should have been \$18.668 billion. Also, the average share price (in U.S. dollars) for the companies in the Italy table rose by 5%. And the average share price (in U.S. dollars) for companies in The Netherlands rose 4%.

"Building the best retirement plan" (Business Week Investor, July 19), a chart titled "Lowering risk via asset allocation" showed the wrong distribution of assets for the portfolios presented. The balanced plan was composed of 45% large-cap stocks, 22% mid-cap stocks, and 33% bonds. The aggressive plan is composed of 75% large-cap stocks and 25% bonds.

SHOULD BOTTLE STUFF

"The Warren Buffett you don't know" (Business Week Investor, July 5) was able to pin-point the man—his down-to-earth humility combined with his basic business sense. An executive can learn more from Buffett than from any business school. The biggest contribution Buffett can make is to ensure that his knowledge is shared for all to benefit from. This deserves a book from Warren, which should be made compulsory reading for business executive, student, or investor. My salute to Warren for showing the world that values-based business can be financially rewarding as well.

Hemant Amin
Singapore

It was interesting to see that Warren Buffett, a "genius" value investor, now seems to leave a legacy as a captain of industry. I am in awe of his skill with money, but if I were running his show, I wouldn't change horses in mid-stream. Like watching Mozart change his style

to emulate his contemporary Salieri. Sad.
Robert Hively
Tokyo

STRAIGHT TALK ABOUT ONLINE INSURANCE

I was dismayed that "Term life bargain days" (Business Week Investor, July 5) suggested that readers consult an agent to get educated, then buy insurance online. I would like to believe that most people would value the

agent's advice and would buy from him. The article also said online insurance policies are cheaper. Insurance company pricing is set by the states, for the most part, and cannot be amended unless separate rates are filed. The agent's commission is built into the premium. The online buyer is paying a commission to someone.

Richard H. Pelkofsky
Pelkofsky Insurance
Poughkeepsie, N.Y.

Yes, term life rates may go up Jan. 1,



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Readers Report

2000, because of state requirements, but let's stop confusing the public about where to buy their coverage. Buying insurance on the Web is no less costly than buying from a broker or an agent who has access to the same carriers.

As a founding principal of First Financial Resources, I would like to say that we pride ourselves in being carrier-neutral and product-neutral. We sell the same products as the Internet companies at the same price. The difference is that we follow through, and the customer can rest knowing that ownership, premium payment, and beneficiary are properly coordinated with their wills and estate plans.

Michael P. Hanley
First Financial Resources
Walnut Creek, Calif.

THIS TECHNOCRAT IS NO TECHNOPHILE

In "Bush sends Gore a message: You don't own Silicon Valley" (Washington Outlook, July 5), George W. Bush is described as moderate and tech-friendly.

Moderate? Maybe. Tech-friendly? Not in Texas. Among the bills he vetoed after the session ended in June was one that would have required the Secretary of State's office to post information about judicial candidates on the Internet. Another bill he vetoed would have required the Texas State Board of Professional Engineers to publish a roster of its licensees on the Internet.

Texas chooses judges, all judges, in partisan elections. It's darned difficult to get info on these candidates, so uninformed Texans have been known to elect candidates with catchy names and checkered pasts.

Al Gore may not have invented the Internet, but I'm sure he knows what it's good for—information. Perhaps some of the techie advisers on the Bush bandwagon can clue the governor in. Surely a social moderate wouldn't want to keep people in the dark on purpose.

Claudia Wilson
Fort Worth

THEY'RE MY WIRES AND I'LL SURF IF I WANT TO

Debate over open access should focus on one key point: Since deregulation of the cable industry, consumers have been hit with one rate increase after another ("Whose cables are they?" News: Analysis & Commentary, July 5). The companies have justified these increases as necessary to enable them to build up a modern cable network to

better serve their customers. Local governments have bought these arguments and granted steep increases in the name of the public good. The bottom line is that subscribers have paid for these networks—they should now get to use them. If I am paying for cable access in the first place, why should I pay a premium to let me use my own Internet service provider over that cable?

Frank M. Tims
St. Petersburg

THE U.S. IS READY TO FIGHT, BUT NOT READY TO WIN

Do we need to spend more on the Pentagon? No—we now outspend all of NATO and Russia and Japan together ("The Pentagon's badly aimed billions," Editorials, June 28). We sell all kinds of military hardware all over the planet. We don't care where it goes. Often this hardware is used by repressive regimes to subjugate and suppress their people.

The military has claimed in Congress that it lacks readiness. The real lack of readiness is in the use of diplomatic activity to prevent conflict and engagements.

R. G. Wells
Taos, N. M.

ARE THEY LOOKING AFTER GRANDMA OR SHAREHOLDERS?

Baby boomers should rejoice that nursing homes are, as your headline says, "On the sick list" (Finance, July 5). For more than 30 years, since the advent of Medicaid and Medicare, for-profit nursing homes—which control 80% of nursing home beds in our country—have focused on how to squeeze money from the government and private payers to benefit shareholders. For-profit nursing homes are little different today than they were 35 years ago.

Your article makes only passing reference to not-for-profit organizations. Maintaining a nonprofit mission, with oversight from a voluntary board of directors, insures a long-term vision. Care for the aged should not be driven by short-term grabs at Medicare funding. If nursing home chains are on the "sick list," that is a symptom of a more serious disease. Our society has abdicated the care of the aged to a profit-driven sector where traditional rules of supply and demand do not exist.

You should focus on new models of care for the elderly, where leadership is coming from nonprofit organizations that

measure quality of life, rather than shareholder profit. Which would you rather choose for your grandmothers?

Daniel A. Repp

Hebrew Home for the Aged

Riverside

New York

'NOW THE SATURN IS JUST ANOTHER CAR'

At first I was pleased to see Saturn would be offering a larger car to compete with Honda Accord and Toyota Camry ("A different kind of Saturn," News: Analysis & Commentary, July 5). But then I read that Saturn designed, engineered, or manufactured the car, and that it will have only "certain elements of the Saturn character," such as "no-haggle pricing, friendly sales service," and "dent-resistant plastic doors" on the doors.

The reason people bought the Saturn was because of its quality and reliability, not friendly salespeople or plastic doors. Now the Saturn is just another car.

Steve
San Jose, Calif.

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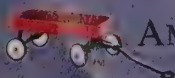
It's never too early to teach our kids about economics.

Chances are your children are not familiar with 401(k) plans. They are, after all, children. As they grow older, they're going to be faced with a dizzying array of economic options. Whether it's saving their allowance or saving for their retirement, we need to prepare them to make the right choices.

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Photo: Garry Wade



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PAUL M. ENG

SHARP ADVANCE DIGITAL PHOTOS

Film's new camera captures 50% clearer pictures—but it's a memory hog

I've never been a big fan of digital cameras. Compared with old-fashioned analog cameras, they're relatively pricey and produce comparably less sharp and detailed pictures. I'm using the Web more, so my friends and family are going online, too. So I've been shopping for a camera that produces images ready to be put onto a Web site or e-mailed to an E-mail.

I started looking for a size was an issue, I plan to take many pictures during the summer. But I didn't want to give up portability or convenience.

The digital camera that caught my eye is the Fuji MX-2700 from Fuji (800-800-4444 or www.fujifilm.com). It weighs slightly more than half a pound and is not much larger than a thick stack of playing cards. The camera, with a hand-brushed-aluminum body, easily fits into a shirt pocket.

UMP. The MX-2700 represents a significant advance in digital-camera technology—specifically, it's called a charge-coupled device, or CCD. The device transfers what the camera sees through the lens into digital data. Compared with its predecessor model, the

MX-2700 captures 50% more of the pixels, or dots, used to make up a digital image. What does that mean? Larger, more detailed pictures. People using their computers to view vacation pictures I send them by E-mail will notice that their clarity is exceptional.

This clarity comes at a price. Each picture takes up nearly a megabyte of memory at the camera's highest-quality setting. That means you can quickly fill up the camera's removable, two-inch square, wafer-thin 8MB SmartMedia flash memory cards, which function much like floppy disks. An additional 8MB card costs \$54. Fuji offers higher-capacity cards,

THE PROMISING MX-2700

SIZE 3.1 inches wide, 4 inches high, 1.2 inches deep; 9.3 ounces

PRICE \$699

DISTINGUISHING FEATURE Clearer pictures than previous model

PLUSES Point-and-shoot or useful manual adjustments

MINUSES Pricey, given picture quality. Lengthy recharging time

with 16MB for \$90 and 32MB for \$128.

The MX-2700 digital camera works like many point-and-shoot film-based cameras. If you want, the camera will do all the work, figuring out the correct focus, light levels, and so-called white balancing.

This last feature is important for digital cameras, since various lighting sources, say, fluorescent or incandescent bulbs, produce colors that don't register to your eye but can leave pictures with an odd tinge.

The MX-2700 also offers shutterbugs a flexible manual mode, allowing them to override the camera's decisions and settings. I found the manual setting quite handy, since I thought the camera fired its built-in flash way too often. Pictures wound up overexposed, especially in close-ups. Using manual settings, I was even able to add special effects. One is a sepia

The screen can also be used in place of the small optical viewfinder, but I would advise using it sparingly, since it's a power hog. According to the MX-2700's 96-page manual, using the LCD to frame pictures will reduce the rechargeable lithium-ion battery's life cycle from 250 pictures to a mere 80. Recharging the battery takes nearly eight hours, though an optional \$70 fast charger takes just an hour.

JUICY FREEBIE. The camera comes with Adobe Photoshop software and cables to connect it a computer's serial port or to a TV video jack, allowing for impromptu video slide shows. But to get pictures into a PC

without cumbersome cables, you might want to consider Fujifilm's optional floppy-disk adapter. The peripheral, which looks like a standard 3.5-inch floppy-disk drive, has a slot to accept the SmartMedia memory card. Using Windows Explorer, a few clicks transfer the digital photos to the PC from the memory card. The list price on the adapter is \$99, but until August, Fuji offers a rebate that lets MX-2700 buyers get a floppy disk-adapter for free.

The free peripheral is a good thing, since the camera has a fairly high retail sticker price. Some online retailers and auction sites have been offering the MX-2700 for around \$600, but that's still a bit north of the magical sub-\$500 that seem to spark most digital purchases. At the current price tag, the MX-2700 hasn't bowled me over. But I'll concede it has made me less of a humbug when it comes to digital cameras.



tone that produces a faded Old West-style picture. Another lets you add either silver-cross or rainbow star-like bursts to bright points in a picture, such as Christmas-tree lights.

A particularly useful feature is the two-inch liquid-crystal display screen built into the back of the camera. It lets you see your shots before snapping the shutter.



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BUILDING WEALTH

The New Rules for Individuals, Companies, and Nations in a Knowledge-Based Economy

By Lester C. Thurow

HarperCollins • 301pp • \$27.50

WHY AMERICA HAD BETTER WISE UP

Empires fall. This usually happens as civilizations lose touch with what made them great. Think of a Europe that grew dumber and dumber over the five centuries following the fall of Rome. Along the way, literate parents failed to teach their children to read, and the region marched backward into ignorance and poverty. In his latest book, *Building Wealth*, economist Lester C. Thurow imagines medieval men and women fetching water from magnificent aqueducts and wondering how their engineer ancestors ever got so smart.

Are we losing our way as well? Thurow, the well-known author and longtime Massachusetts Institute of Technology professor, has always insisted that societies need to invest in

schools and tools to thrive. Those that substitute shopping for investing, he warns, are heading the way of the late Romans. This is hardly a new line for Thurow. But in *Building Wealth*, he updates his thinking for the Information Age. And he makes a strong case that America will be hard-pressed to sustain the early lead it now enjoys over Europe and Japan.

Don't be fooled by the subtitle: *The New Rules for Individuals, Companies, and Nations in a Knowledge-Based Economy*. That's a marketing tag. Browsers who pick it up hoping to find out whether Internet stocks have peaked will be cruelly disappointed. Thurow, a big-picture economist if there ever was one, focuses on nations and regions in

the sweep of history. In doing so, he puts together a recipe for national wealth. Not surprisingly, this one-time champion of European-style industrial policy stakes out a big role for government in education and infrastructure as well as in research and development.

With Europe slumping through the middle of the decade while America races ahead, it may seem a strange time to question the American model. Indeed, these early years of the digital revolution have made Europe a showcase for America's strength. When it comes to tearing down old buildings and building up companies, no one in Europe is faster. Laggards such as Westinghouse have succumb, freeing up brains and capital for newcomers, such as Yahoo! By contrast, Europe and Japan struggle to catch up. They cast the likes of Siemens and Mitsubishi Motors and fail to produce new companies. All 25 of Europe's largest companies already were big in 1960; back then, only a third of today's U.S. top 25, including Microsoft and Intel, didn't even exist.

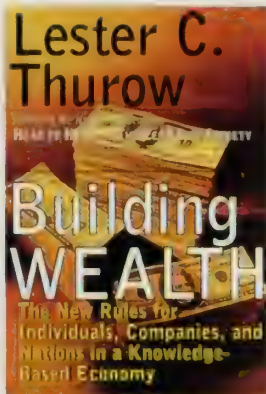
But Thurow sees the cracks in the European economy that's the envy of the world. He argues that America's power in innovation and enterprise is blinding the world to its severe shortcomings, particularly its lack of schooling. For para-

You call the shots.

NO NATION CAN STAY ON TOP, SAYS THUROW, WITH A FAILING EDUCATION SYSTEM

y takes us back to the first industrial revolution. It was the British who led in the steam age, nearly 200 years ago. They had a brilliant technology, leadership in steel and textiles, countless capital markets. Yet in following decades, while the U.S. underclasses remained poor and ignorant, Britain was undertaking a massive experiment in universal education. By the end of the 19th century, he writes, Britain was outproducing the U.S. by employing literate workers to run the new technology.

For anyone who has read Lester Thurow, we can see his argument closing in. He maintains that now more than any country can stay on top with an education system that, as he would have it, usually abandons the two-thirds of the population that don't graduate from high school. He recites familiar studies showing that the U.S. has tumbled to the bottom of the heap among industrialized countries in basic education.



trialized countries in basic education.

And why does America put up with this? The elite trusts that its kids will catch up in college and cruise to the summit via America's peerless graduate schools. Meanwhile, voters in general, driven more by fear than hope, are inclined to spend tax dollars on jails before schools.

Such generalizations grate a bit, and Thurow fires them off at a dizzying rate. He sums up nations and civilizations in one or two words. Israel: brilliant, disorganized. Singapore: regimented. The Middle Ages: dark. Reading this book is like roller-skating with a brainy guide through a history museum. But he repeats enough so that you pick up his formula for wealth. It boils down to a mix of freedom, order, education, and investment, along with a healthy tolerance for risk.

And the winners? Each region, it turns out, is missing something. The

Japanese shun risk and lack innovation; the Europeans hobble startups. But Japan and Europe boast better-schooled workforces than the U.S. This, says Thurow, should permit them to hone the technologies now pouring out of U.S. labs. In time, these rivals could improve upon America's crashing computers and buggy software, much as they bested the Ford Pinto.

Of course, there's a big difference this time around. The very stuff of this industrial revolution—information—travels everywhere almost instantaneously. Innovators at computers can cash in from practically any point on the globe. The trick for governments is to prepare more of their people for the information economy—and then to get out of their way as they coalesce into companies. Thurow makes it sound simple. But don't count on Americans tuning in to his message until the digital economy starts sputtering.

BY STEPHEN BAKER

Paris-based Baker covers the latest revolution from an office near the Bastille.



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BY ROBERT KUTTNER

LET THE GREAT SURPLUS DEBATE BEGIN



CHOICES:
Tax cuts or
restored
spending in
areas the
public wants?
The nation
deserves a real
dialogue—and
isn't getting it

Robert Kuttner is co-editor of *The American Prospect* and author of *Everything for Sale*

Should we pay off the national debt with part of the budget surplus, as President Clinton proposed? The conventional answer is "of course." Retiring the debt would increase the national savings rate and spare the government the expense of paying interest. But there is a reason why we should not: Without debt, the Federal Reserve would have a trickier time conducting monetary policy.

Ever since the Fed became a true central bank, its most important monetary lever has been "open market operations"—buying or selling Treasury securities to expand or contract the money supply. (The Fed also raises or lowers the discount rate, but it fine-tunes its monetary targets in the open market.) Obviously, once the national debt is retired, there are no more Treasury securities to buy or sell.

In principle, the Fed doesn't need Treasury securities for its open market operations. It could use a basket of state and municipal bonds, AAA corporates, and other federal instruments, like Freddie Mac bonds. But these are not backed by the full faith and credit of the United States. They are not nearly as safe. What would take the place of Treasuries as a benchmark? Would financial markets become more volatile? The answer is: No one really knows.

Economists on both the supply-side right and the Keynesian left have expressed alarm. For example, Bruce Bartlett of the National Center for Policy Analysis recently warned that without Treasuries, bond dealers would have a harder time pricing corporate and municipal bonds and that savers would be deprived of government savings bonds. James K. Galbraith of the University of Texas, who agrees with Bartlett on little else, observes in the same spirit that "we run the most liquid debt market in the world, which is why the dollar is the reserve currency and why flights to quality don't fly from us..." Moreover, Galbraith worries that if the Fed starts buying and selling private corporate and municipal securities, it would soon begin to affect their prices—something Alan Greenspan seemed so concerned about when he warned against a federal mutual fund for Social Security.

The way retiring the debt would affect monetary policy is an intriguing teaser and perhaps a potential problem. But the deeper issue is what this country should do with its new windfall—a 15-year government surplus

now projected at nearly \$6 trillion, more a trillion dollars above earlier estimates. Paying off the debt, as Clinton proposes, would use most of the money for tax cuts or for public spending. Bartlett is sounding the alarms about paying off the debt not because he would rather have a tax cut. Galbraith, in contrast, wants the government to use deficits some of the time for economic stimulus and to underwrite public programs.

Clinton initially succeeded in blocking a national debate over what to do with the surplus by pledging that it would be locked up to shore up Social Security. When the surplus turned out to be enough to accomplish that goal and more, White House budgeters momentarily panicked and Republican tax-cutters broke out the champagne. But Clinton quickly stepped forward with an ill-defined "fund" for children's needs, Medicare drug benefits, and a plan to pay off the national debt. These initiatives had three things in common. They were thought up almost on the spot rather than being carefully considered policy initiatives, they passed the test of public opinion polling, and they soaked up money Republicans wanted for tax cuts. **MEAGER WAGES.** The country deserves a real debate over the surplus, and it isn't getting it. Should we cut taxes—and if so, how? Should we restore government spending in areas that the public seems to want and the economy seems to need? The enlarged surplus reflects two factors—a higher-than-anticipated growth rate and the effect of the budget cuts that are the enforcement mechanism of the 1997 Balanced Budget Act. Because of the caps, public spending will fall from 19.7% of the gross domestic product to 16.6% in 2002, crowding out most spending other than social security, Medicare, and defense.

I have argued in this space that certain public outlays complement the New Economy—outlays for education and training, housing that will keep full employment from being inflationary. Many in both parties would rather return part of the windfall to the taxpayers or use it to supplement the meager wages of workers too poor to pay taxes, via an enlarged earned income credit. Paying off the debt introduces a very extraneous complication, which might compromise monetary policy. Instead, we should have a real debate between tax cutting and public investment.

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BY GENE KORETZ

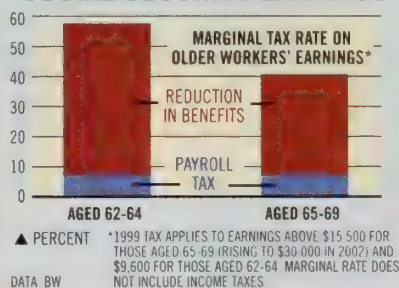
CUT WORKING SENIORS' TAXES

It would spur them to earn more

With big budget surpluses looming, a hot tax-cut battle is shaping up on Capitol Hill. On one side, the Republicans have resurrected plans for a hefty, broad-based cut; on the other, Democrats are calling for less massive tax relief and more stress on paying down the federal debt and investing in education and health care.

What could be lost in the shuffle, however, is a modest tax cut that has

THE HEFTY TAX ON SOCIAL SECURITY EARNINGS



drawn support from experts and legislators across the political spectrum: doing away with penalties that reduce Social Security benefits for recipients earning more than prescribed limits. Intriguingly, a recent economic study indicates that such a change would not only induce seniors to work more but also, in the long run, do so at little if any cost to the government.

Today, Social Security pensioners lose \$1 for every \$2 they earn over \$9,600 if they are under 65 and \$1 for every \$3 they earn over \$15,500 if they are 65 to 69—with the limit for the latter group rising to \$30,000 in 2002. When they hit 70, of course, people can earn as much as they want with no penalty. But till that age they face marginal tax rates of at least 40.95% to 57.65% (counting payroll taxes)—and as high as 80% for some seniors who also pay income taxes.

Does the earnings penalty make any sense? One motive of its Depression-era designers was to induce old people to retire and make way for younger workers, and its defenders still argue that Social Security is mainly a social-insurance scheme for seniors with reduced earnings capabilities. Junking the limit,

they say, would simply put cash in the pockets of affluent working seniors, reduce trust-fund assets, and might even induce some folks to work less.

Most economists today are unconvinced. For one thing, the combined prospect of a surging elderly population, longer and healthier life spans, and slowing labor-force growth have shifted economic-policy imperatives toward encouraging seniors to work longer and save more. For another, new economic research suggests that eliminating the earnings test would accomplish this goal at little cost.

In a recent National Bureau of Economic Research study, Leora Friedberg of the University of California at San Diego found big shifts in older workers' earnings patterns each time the earnings limit has been raised in the past 20 years. Specifically, a large number of men appeared to increase their work efforts so that their earnings rose until they hit the new limits.

Using an econometric model drawn from these data, Friedberg predicts that many such workers will boost their work efforts in 2002, when the limit will rise to \$30,000 for workers 65 to 69. But she also finds that some high-wage earners who lost benefits in the past will now choose leisure over work and actually work a bit less—offsetting the increased hours put in by the first group. If the earnings test were eliminated entirely, on the other hand, she finds that total labor supply by affected seniors would rise by a healthy 5.3%.

As for the cost, Friedberg notes that under current law, those who lose Social Security benefits today because of the earnings penalty receive compensating increases in future benefits. Thus, while the immediate cost to the system of getting rid of the limits could run as high as \$5 billion a year or more, the long-run cost would be minimal.

HOW HIGHER FEES HURT BANKS

Customers react by going elsewhere

Anyone who has maintained a checking account over the past decade knows that the rules of the game have been dramatically changing. Specifically, your once friendly bank or thrift institution has probably been imposing a lot more fees and restrictions on your account—in an understandable effort to save money and wring even more profits from your need for its services.

Among other things, many banks try to save money on handling cash checks—either by not returning at all or, more likely, charging a set monthly amount for all returned checks or a per-check fee. Some charge customers for using live tellers instead of ATMs. And many have raised their fees considerably for holding bounced checks and for using other banks' ATMs.

Ironically, reports economist John Stavins in a recent issue of the Federal Reserve Bank of Boston's *New England Economic Review*, most of these gains don't seem to be paying off. In a study of checking accounts at some 250 banks around the nation in 1997, she found that only two of the features described above appeared to be producing higher revenues: increased charges for bounced checks and higher fixed monthly fees for returning canceled checks.

In all the other cases, raising or tightening restrictions tended to induce depositors to switch to other institutions—thus lowering the banks' take. Consumers, it seems, are more sensitive to such practices than banks realize.

EUROPEANS LOAN UP ON U.S. STOCKS

But Yanks don't return the favor

Wall Street hasn't lost its charm to overseas investors. Treasury data indicate that foreigners had bought some \$28.5 billion of U.S. stocks on a net basis through April of this year while the U.S. disgorged \$13.9 billion worth of foreign equities.

Economist Joseph P. Quinlan of Morgan Stanley Dean Witter points out Europe is still the biggest buyer by far. After pouring some \$72 billion into U.S. stocks last year, it has already purchased an additional \$30.5 billion, with eight months still to go. Meanwhile, U.S. investors have unloaded \$25.2 billion worth of European stocks (almost as much as they sold in all of 1998), even as they have snapped \$12.1 billion worth of Japanese equities.

THE MARKET'S FOREIGN CONNECTION



MES C. COOPER & KATHLEEN MADIGAN

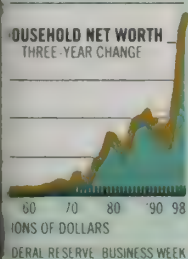
TOO MUCH WEALTH, TOO LITTLE RESTRAINT

Stock market gains are fueling demand and complicating the Fed's job

U.S. ECONOMY

How do you stop a runaway train? That's the problem facing the Federal Reserve right now. The Consumer Index is barreling down the tracks, pulled ahead by powerful locomotives: solid job and income growth, easy credit, and soaring capital gains. The Fed would like to see the express downshift to the speed of a local, and a consumer slowdown is imperative to head off inflation worries that could lead to severe hikes in interest rates.

WEALTH GAINS ARE ACCELERATING



However, this decade's surge in wealth suggests that the Fed's job of braking growth may be more difficult than at any time in its history. As Fed Chairman Alan Greenspan has pointed out, rising stock portfolios as well as home prices have accounted for one percentage point of the 4% annual growth in real gross domestic product over the past three years. During that time, household net worth has soared by \$9.4 trillion (chart). Based on the rule of thumb that households spend 3¢ to 5¢ of every dollar of new wealth, those gains over the past two years have added 1.5 percentage points annually to the growth in real consumer spending.

This kind of stimulus is unprecedented in the postwar era, and Greenspan has noted that even if stock prices just hold steady, there is still enough wealth in the pipeline to keep spending zipping along for months to come. Already during the past year, consumer buying has grown 5.5%, the strongest yearly pace in 15 years, and it has accounted for more than 90% of economic growth.

FED'S DILEMMA:

Although the wealth windfall is a source of growth, Greenspan & Co. believe that the Fed should not directly target the stock market. Stock prices usually do suffer when interest rates rise. Given the stock market's double-digit gains so far in 1999, households already have racked up sufficient capital gains to propel spending forward into 2000. Consequently, to downshift growth from its heady 4% to the 3% range that Greenspan has hinted is the Fed's speed limit, the policymakers may have to squeeze harder than they have in the past to

achieve the same result, although the economy's true speed limit is still a matter of debate. If stock prices do not stop contributing so much to demand, the labor markets and credit availability will have to bear the brunt of that adjustment. But if stock prices move sharply lower, then growth in 2000 could slow more than the Fed wants.

Moreover, monetary policy also may be complicated by fiscal policy. Republicans in Congress want to use part of the federal surplus for tax cuts. But such cuts will stimulate demand. In particular, trimming the capital-gains tax rate will push the stock market higher, contributing even more to the wealth effect that is motivating households to spend more than they earn.

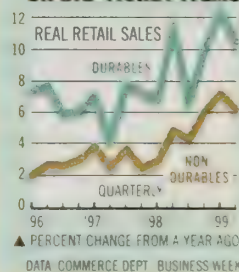
ALTHOUGH POLICYMAKERS

want to see demand slow, the latest data on the stock market, bond yields, and borrowing suggest that consumers have the wherewithal to keep their spending increasing close to the 5% annual rate of the past two years. Even with foreign producers satisfying an increased share of U.S. demand, the recent pace in consumer spending is fast enough to keep the economy growing by 4%, a rate that the Fed fears will breed price pressures.

So far, the Fed's June 30 rate hike has only boosted the economy's financial stimulus, arguing that more aggressive action may be needed. Since that quarter-point increase, the Dow Jones industrial average has risen 3%, bringing the year-to-date gain to 21%, and the yield on the 30-year Treasury bond has fallen from 6.07% to 5.91%. Clearly, the markets believe there is not a lot of urgency at the Fed to slow the economy. Unless the Fed changes that perception, the markets will continue to power the rapid growth in demand.

Consumers continued to splurge in the second quarter. Retail chain stores, by some surveys, posted sales gains of more than 7% from the year before, and the Commerce Dept. reported that June buying rose 0.1% from May, on the heels of May's 1.2% advance from April. The June gain was held back by a drop in car buying. Excluding vehicle sales, June receipts increased 0.4%. However, June auto sales fell to an annual rate of

HOUSEHOLDS SPLURGE ON BIG-TICKET ITEMS



16.9 million, down from a 13-year high of 17.2 million in May.

The June store data mean inflation-adjusted retail sales grew at a healthy 5% annual rate in the second quarter, and the market rally since June 30 will help fuel spending in the second half. Moreover, the wealth factor influences what people buy. Over the past three years, overall retail sales have grown an average of 6% per year before inflation adjustments. But big-ticket items, such as motor vehicles, furniture, and building materials, increased at faster rates. Staples such as food and gasoline are rising only modestly, even with the recent runup in gasoline prices (chart, page 23).

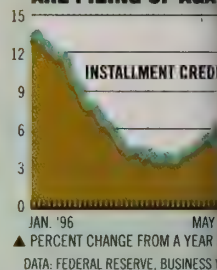
THERE IS A DARKER SIDE TO consumers' good times, however. Households are boosting their spending far above the 3.4% pace of real spendable income, relying increasingly on wealth gains as a substitute for traditional new savings. That strategy has resulted in a negative savings rate for the first time since the Great Depression.

The trend to skimp on savings could backfire down the road. If the Fed succeeds in slowing job and income growth, consumers may feel the need to start saving out of their current income again. Worse, households now have no readily available cushion to fall back on should they face dimmer job-market prospects, tighter borrowing conditions, or a drop in stock prices.

The boom in wealth has not only meant that households feel less need to save. They are also taking on more debt. After slowing their rate of debt accumulation from about 14% per year in 1995 to only about 7% by mid-1998, households are starting to add to their debt burdens at an accelerating pace. Households added \$12.1 billion to their installment debt in May, bringing the growth rate from a year before to 7.2% (chart). The sum of installment debt, home equity loans, and credit card debt now equals more than 24% of aftertax income, implying that households today are more highly leveraged than at any time in the postwar period.

All this means that slowing the economy to a sustainable growth rate will be an unusually difficult maneuver for the Fed. Tighter credit conditions have always hit certain segments of the economy, such as factory workers and borrowers, harder than others. But this time, without a slowdown in wealth gains, which have accrued mostly to the top 20% of income earners, a modest hike in interest rates will have less of an impact on growth than it had in the past. So more hikes may be necessary. The Fed's move to slow down this Consumer Express without derailing

CONSUMER LOANS ARE PILING UP AGAIN



GERMANY

AT LAST, A FITFUL RECOVERY

Finally, the euro zone's largest economy is picking up, but not fast enough to help the euro. Germany's real gross domestic product rose a larger-than-expected 0.4% in the first quarter, powered by a 2.3% increase in consumer spending and a 3.4% jump in business investment.

Overall GDP growth would have been higher except for a sharply slower pace of inventory accumulation. That drag, coupled with export weakness from slower global growth, hit manufacturing in 1998. But the sector is looking better now.

While overall industrial production slipped 0.2% in May, manufacturing output alone rose 0.4%, after a 0.5% gain in April. Facto-

ries are lifting production in response to increased domestic and foreign orders (chart). But output remains below its year-ago level.

Capital-goods orders are leading the demand pickup. Consumers, on the other hand, have scaled back their spending. Retail sales in April and May were 3.6% below their first-quarter average. And consumer confidence fell in May to its lowest reading since January. With demand sluggish, price pressures are

nil. Consumer prices in June were up only 0.4% from a year ago.

The spending slowdown can be traced to weak labor markets. Although Germany's jobless rate, as measured by the Bundesbank, fell

in June, it was still a high 10.5%. And a recent survey of consumers showed that unemployment remained their biggest concern.

The outlook does not offer much hope for job growth. Recent forecasts made by the major German economic consulting firms forecast real GDP growth of 1.5% to 1.7% for 1999, with growth above 2% in 2000. The pickup, however, will not lead to strong employment growth, so the jobless rate will likely remain at or near double digits.

Germany's gradual recovery reduces the chance of an interest-rate hike by the European Central Bank. But with the U.S. Federal Reserve hiking rates, the euro remains under intense downward pressure—and it's likely the currency will soon trade at par with the U.S. dollar.

FACTORY ORDERS ARE STARTING TO REBOUND



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A close-up of a woman's face, looking directly at the camera. She has dark hair and green eyes. In her hand, she holds a small photograph of a relay race. The photo shows several runners in a track, with one runner in the foreground wearing a light blue uniform and a red tie, running towards the right. The background is dark and blurry.**Tivoli**

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ASIA

DIRE STRAITS AGAIN

Taiwan baits Beijing—and rattles Washington—with a two-China stance

Summer is in full swing. So is it time for a new crisis in Asia? That has been the pattern for two years running. Until now, it seemed, 1999 might be different. Many of the Asian economies that were so troubling in 1997 and 1998 now seem to be on the mend. There are even positive vibes out of Japan.

But then there's China. Suddenly, the Taiwan Strait looks like a dangerous place again. Just days after Taipei and Beijing scheduled a new round of talks, Taiwan President Lee Teng-hui on July 9 shocked Beijing by telling an interviewer that negotiations should proceed on a "state-to-state" basis, with China and Taiwan assuming equal status. Lee stopped short of announcing full independence. But his evident repudiation of the one-China policy, creates the potential for a dangerous confrontation between an intractable Taipei and an outraged Beijing. The move may also complicate matters for China's would-be reformers, such as Zhu Rongji, who is under pressure from hard-liners at home after failing to win a commitment by the U.S. to help get it into the World Trade Organization.

Whether Lee's remarks lead to a real confrontation, they have already made America's China policy more dicey. Lee's provocative statement bewildered and angered the Clinton Administration,

which has been trying to find ways to repair strained relations with Beijing since the Belgrade embassy bombing.

Lee's posturing may indeed be aimed in part at taking advantage of rising anti-China sentiment in the U.S. A Republican Congress angry over Chinese



President Lee may well be playing to rising anti-China sentiment in the U.S.

nuclear espionage could conceivably defy the White House and back Taiwan in a new war of nerves with Beijing. Thus, playing Washington off Beijing could help Lee.

Lee also has a simpler agenda. With Washington and Beijing pushing Taiwan toward political talks in October, he

A PEOPLE'S
LIBERATION
ARMY
SOLDIER AT
A MISSILE
DISPLAY

feels he must set up some way for Taiwan to deal with China as an equal before then. Taiwan's de facto independence would be jeopardized if Beijing set all the definitions and conditions for negotiations. "There has been growing disappointment and resentment in our society that Beijing has used the one-China idea to denigrate Taiwan," says Lin Chong-pin, deputy chairman of Taiwan's Mainland Affairs Council. **BIG GAMBLE.** Lee also seems to see this as his historical mission to prepare Taiwan for independence. If his gambles work, and Beijing does little more than bluster, then Lee can claim to have Taiwan in a strong bargaining position for any further talks with Beijing down the road. That would be the supreme political achievement for Lee, who leaves office next May.

But the move could also backfire. Beijing, which has consistently warned Taiwan that it risks military invasion if it pursues a formal split, sees Lee's move as just short of a declaration of independence. Lee is "playing with



Beijing has warned Taiwan time and again that it risks invasion if it pursues a formal split. Lee's words are seen as a virtual declaration of independence

ably continue his policies. Lee may hope that looking tough with China will win voters, as it did in 1996. And he may hope to portray rival James Soong, a mainlander who leads in the polls, as an untrustworthy China sympathizer.

Beijing has long suspected Lee, a native-born Taiwanese who was educated in Japan, of secretly favoring independence. Indeed, now in his political endgame, he may feel it's his last chance. "President Lee's thinking is very close to the idea of Taiwan independence, and he wants to see that his ideas can still be effective after he steps down," says Yeh Ming-teh, a political scientist at Taiwan's National Chi-Nan University.

But Beijing's leaders have their own reasons to get tough now. Externally, it would show that China is strong—even after being thwarted is its WTO ambitions and being excluded from the group of nations intervening in Kosovo. Internally, the issue of Taiwan's sovereignty is emotionally charged. None of the leaders can afford to look soft on Taiwan.

It's significant that Lee dropped his bombshell in an interview with the German broadcasting company Deutsche Welle. While divided, East and West Germany were able to coexist and recognize each other's sovereignty—exactly the model Lee would like Taiwan and China to follow. Eventually, the Germans reunified but only after the East succumbed to capitalism. That's not the kind of reunification Beijing has in mind, however.

By Jonathan Moore in Taipei, with Dexter Roberts in Beijing and Paul Magnusson in Washington

Taiwan would suffer "monumental" as a result, the Chinese government warned. Far from taking up its new cause, the White House restated its one-China policy. Taiwan's Republican friends on Hill quietly fretted.

Now, China's strategy will be to step up its denunciations with an international diplomacy campaign to get it to reverse course. If Taiwan budge, though, Beijing will take sterner measures. "The Chinese government will take firm action or it will undermine the U.S.-Taiwan relationship or not. Military action is quite possible," says Yan Xueqian, director of foreign-policy studies at Beijing's China Institute of Contemporary International Relations. If it is that point, Beijing may respond with a massive show of military force along its shores facing Taiwan, including missile strikes.

A full-blown military crisis—Washington's worst nightmare—can't be ruled out. The U.S. has built its Tai-

wan policy around getting the two sides back to the table, and if the October talks are scuttled, it would be a major setback. Lee's policy switch defies President Clinton's clear opposition to a two-China policy. The last time Beijing and Taipei tangled and Beijing lobbed missiles into the Taiwan Strait in 1996, Clinton sent two aircraft carriers to cool things down. This time, the U.S. is warning Taiwan that it will go it alone if it insists on a provocative two-China policy.

ENDGAME. All this makes Lee's stand seem very risky—outside of Taiwan. But it plays well at home, where many people resent being regarded as second-class citizens of China. "Taiwan is really afraid that if it negotiates with China as a local government, then we will be defeated as soon as we sit down at the table," says Joseph Wu, a research fellow at National Chengchi University. Lee, 76, has been President since 1988 and hopes to be succeeded next March by his unpopular Vice-President, Lien Chan, who would presum-

DETROIT

THE UAW'S NEXT BATTLEGROUND

The union is making recruitment a priority, and the first skirmish may well be with DaimlerChrysler

In April, the United Auto Workers (UAW) started an unusual organizing drive at a Mercedes-Benz factory in Vance, Ala. The union told management that it wouldn't attack the company as anti-union or even pass out pro-union leaflets. It didn't seem like such a daring offer. After all, the plant was part of the new DaimlerChrysler family—one of two factories in the sprawling trans-Atlantic auto empire where blue-collar workers were not in a union. And UAW President Stephen P. Yokich was a member of the new DaimlerChrysler board of directors.

The UAW expected a peaceful recruitment drive that would set a congenial tone for this summer's talks between the union and Detroit's Big Three. The UAW says that both DaimlerChrysler co-chairmen, Jürgen E. Schrempp and Robert J. Eaton, assured the union that Mercedes would not interfere.

COVERT AID. But now what seemed like a minor issue over organizing 1,200 Mercedes workers is threatening to erupt into a full-scale war between the UAW and DaimlerChrysler. On July 8, Yokich flew to Stuttgart for a DaimlerChrysler board meeting and blasted Schrempp for allowing Mercedes to provide covert aid to a group of anti-union workers at the plant. He is even considering use of what UAW officials call their "nuclear bomb": a nationwide strike by DaimlerChrysler's 76,000 workers when labor pacts with the Big Three expire on Sept. 14. Schrempp and Eaton decline to comment, but a DaimlerChrysler official says that its bargainers are taking the issue "very, very seriously." Says Jack Laskowski, head of the UAW's



PRO-UNION WORKERS: At a Vance, Ala., Mercedes plant, about

Chrysler unit: "We have a great relationship with Chrysler, but the way Mercedes is acting in Alabama jeopardizes everything we have worked so hard for."

The dustup with DaimlerChrysler affects General Motors Corp. and Ford Motor Co., too. The Mercedes drive is

part of a larger UAW campaign to include the right to organize as part of its bargaining agenda in this year's talks. The target: the auto-parts industry's 400,000 workers. The demand that carmakers tell their suppliers to remain neutral when the union tries to recruit.

The "nuclear bomb" in UAW's arsenal: A nation

til now, auto execs doubted Yo-
ould make such a risky strategy a
iority. It's one thing to ask com-
to stop anti-union behavior in-
It's far trickier—and maybe legal-
questionable—to ask a company to
e what its suppliers can do.
at DaimlerChrysler could turn out
the Big Three problem child is a
prising. Up until bargaining began
ae 14, observers had expected GM
the focus of UAW ire. But union

taste of Yokich's determination: In the
first round of talks, with Ford, Yokich's
opening demand was for neutrality in
organizing drives. In 1997, Ford had re-
fused to deal with parts supplier John-
son Controls Inc. when it shut out the
UAW. Yokich made it clear that he wants
the same kind of support in the future.

At Mercedes, the UAW says it will go
to the mat because it feels the workers
would welcome the union if manage-
ment didn't oppose it. Pro-union workers
say nearly 200 joined
the union committee the
first week it was
formed in April. Then, a
counterattack by the
anti-union group intimi-
dated workers into quit-
ting, the union says.

Even those opposing
the union admit that
workers at Vance have
reasons to complain.
Chief among them:
onerous workloads and
widespread repetitive-
stress injuries. To meet
demand, the plant,
which builds sport-utili-
ty vehicles, is making
188 SUVs a shift on a
line designed for 138.
"The company cut cor-
ners when they built
this plant, so there are
dozens of carpal tunnel
injuries, which is a le-
gitimate issue for the
union," concedes Ollie
Cox, a member of the
anti-union group. Mer-
cedes claims the injury
rate isn't high but won't
give figures. It also says
it hired 300 workers
and put in automation
when output expanded.

Union supporters
say turnover hits 10%
a year in some depart-
ments, surprising at
jobs that pay \$20 an
hour, twice what many
local ones pay. "People leave because of
burnout; it's great pay, but no one
thinks they can last here five years,"
says pro-union worker Randy Prescott.
Again, Mercedes contradicts the union,
putting the turnover rate at about 1%
a year.

Is the company helping the anti-

union campaign, as the UAW alleges?
William Taylor, the plant president, in-
sists that he and other managers don't
try to influence employees. Yet Cox
and another anti-union committee mem-
ber, Wade A. Smith, say managers rou-
tinely have told workers that they
don't need a third party in their rela-
tionship. And workers say it's clear
where management stands. When ZI
Industries Inc., a local Mercedes sup-
plier, defeated the UAW in an election,
Mercedes put the news up on its in-
ternal TV and called employee meet-
ings to repeat the news.

CONTROVERSIAL VIDEO. Employees also
say that when they were hired, Mer-
cedes showed them a 45-minute orien-
tation video in which actors portrayed
union members harassing workers. It
shows a man jumping on an older
women's car in a factory parking lot to
prevent her from leaving until she signs
up to join the union. Mercedes says it
stopped showing the video in late April.
But one new hire says Mercedes
showed him a similar video during his
May 6 orientation.

The anti-union committee has re-
ceived financing from both local busi-
ness owners and the Tuscaloosa County
Industrial Development Authority, which
helped Mercedes win tax breaks for the
plant. Committee members say they
show the same anti-union video as Mer-
cedes has used in its orientations. Cox
and Smith say they got it, plus anti-
UAW literature, from authority officials
who have addressed their meetings and
paid for the hotel rooms where they're
held, they said.

The UAW charges that this has all
been done with Mercedes' blessing. But
J. Dara Longgrear, head of the authori-
ty, and Taylor deny this is the case.
"The union effort appears to us as out-
siders coming in and dictating how our
people will be."

DaimlerChrysler may find it difficult
to resolve the Mercedes mess. The only
way to prove it is neutral, says union
committee member Robert Busch,
would be for Schrempp to go to Alaba-
ma to counter the anti-union message.
That seems unlikely. But if 76,000
DaimlerChrysler workers demand ac-
tion, Schrempp will have to think of
something—or face the consequences
in September.

*By Aaron Bernstein in Vance, Al-
abama, with Joann Muller and Keith
Naughton in Detroit*



signed up in one week, the UAW says

rs and GM seem to be patching up
differences over the spin-off of Del-
automotive Systems Corp., GM's for-
parts unit. And GM has postponed
to switch some factories to modular
ably—an approach that shifts some
bly work to suppliers.
w, the auto giants have gotten a

by DaimlerChrysler's 76,000 workers

COMMENTARY

By Howard Gleckman

GOT A SURPLUS? SIMPLIFY TAXES

Just call me John Beresford Tipton Jr. If you don't recall, Mr. T. was *The Millionaire* of the popular 1950s TV drama—a reclusive philanthropist who stunned average Joes and Janes with gifts of \$1 million. The black-and-white small screen has given way to the Internet. And there has been a lot of inflation since 1955. So I have a slightly grander assignment: Give away \$1 trillion.

That's the size of the projected federal surplus over the coming decade. Of course, the trillion may never materialize. But since Congress seems hell-bent on turning it into a massive tax cut—including measures that will make the code as complex and illogical as ever—I've got an alternative.

How about using the money to shift to a simpler, more economically neutral tax scheme? Dump a bunch of special-interest breaks, but cut overall tax rates. And trim Social Security and Medicare levies, which at 15.3% of payroll are a huge burden on low- and moderate-income workers as well as small businesses. There are plenty of loopholes on the corporate side, too. But for now, let's just focus on individuals.

START CLEAN. Bills now working their way through congressional tax-writing committees would gradually cut rates—which can be a good idea if done right. But they would also add a host of new, targeted tax breaks—for education, child care, health care, investors, oil drillers, and heirs to huge estates. Instead of adding more junk to the code, how about getting rid of about \$350 billion worth of special provisions by dumping all credits for individual taxpayers? Except one—the earned-income credit for the working poor.

Why start a huge tax cut with a tax hike? Because it makes the code simpler and fairer by funding a bigger gift to folks losing those credits.

Now for the fun part. Let's trim the 15% rate to 13%. That's as low as I can go on my limited budget—even a trillion dollars ain't what it used to be. And, while we're at it,

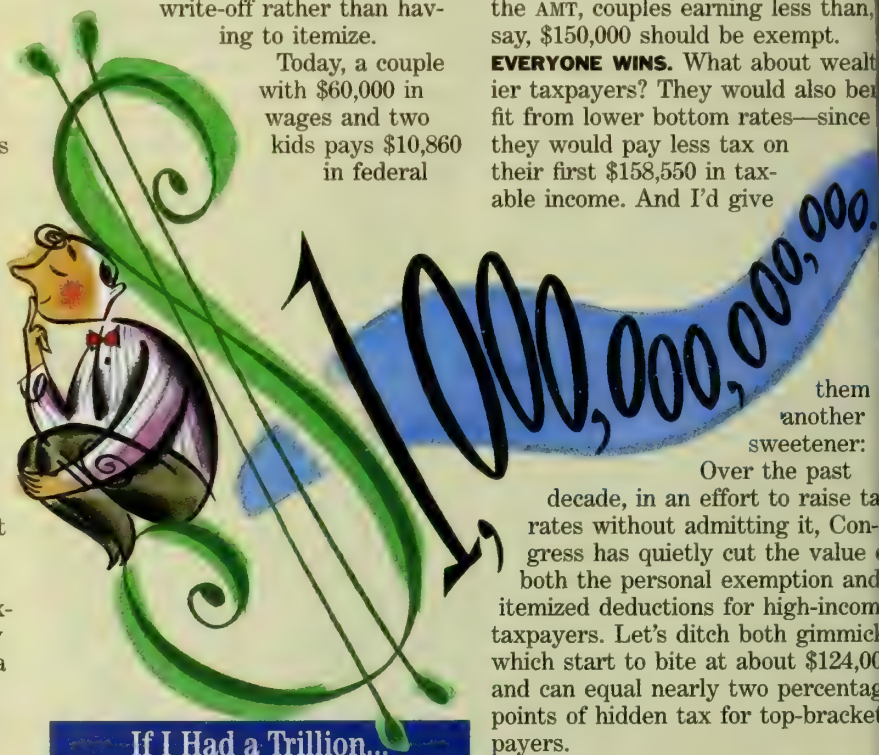
knock two percentage points off the 28% and 31% brackets, too. At the same time, give everyone earning less than the annual Social Security payroll limit—currently \$72,600—a credit equal to one percentage point of the 15.3% tax.

And one more thing: Raise the standard deduction—now \$7,200 for married couples—by, say, a thousand bucks. That would not only cut taxes, it would simplify life for millions who could then take the standard write-off rather than having to itemize.

Today, a couple with \$60,000 in wages and two kids pays \$10,860 in federal

taxes (\$6,270 in income taxes and \$4,590 in payroll levies—and their employer pays \$4,590 more). My plan slashes that by nearly \$1,600, to \$9,294. For low-bracket taxpayers, that should more than make up for the loss of credits for education, child care, and the like. It would also help get them out from under the alternative minimum tax, which uses an add-on levy to penalize families who take advantage of those breaks. To be certain they don't get caught by the AMT, couples earning less than, say, \$150,000 should be exempt.

EVERYONE WINS. What about wealthier taxpayers? They would also benefit from lower bottom rates—since they would pay less tax on their first \$158,550 in taxable income. And I'd give



If I Had a Trillion...

A recipe for tax reform

10-YEAR ESTIMATES
BILLIONS

Cut tax rates	\$800
Provide a partial credit for Social Security and Medicare payroll taxes	450
Raise the standard deduction by \$1,000	40
Scale back the alternative minimum tax	30
Eliminate tax credits for child care, education, and the like.	
Retain the earned-income credit	-350
TOTAL TAX CUT BY 2009	970

them
another
sweetener:

Over the past

decade, in an effort to raise tax rates without admitting it, Congress has quietly cut the value of both the personal exemption and itemized deductions for high-income taxpayers. Let's ditch both gimmicks, which start to bite at about \$124,000 and can equal nearly two percentage points of hidden tax for top-bracket payers.

What else? How about replacing the dozen or more tax-advantaged savings accounts, such as individual retirement accounts and 401(k)s, with a single plan with one set of contribution and withdrawal rules.

What do all of these ideas have in common, aside from a certain hubris on my part? They lower rates for everyone—especially the middle class. They give taxpayers more freedom to spend their tax dollars as they see fit and they dramatically ease the agony of filing a tax return. It's a gift.

Gleckman covers tax policy for *BUSINESS WEEK* in Washington.

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FINANCE

CAN CORPORATE BONDS REPLACE TREASURIES?

A few companies might have the issuing clout to match T-bills

When Ford Motor Co. floated an \$8.6 billion bond package on July 9, the auto maker made headlines everywhere. The biggest private issue ever, it eclipsed the previous record set by AT&T, which sold \$8 billion in bonds on Mar. 23. In the past, such huge issues were attempted only by governments—which is precisely the point. The No. 2 carmaker decided to lump together the borrowing that it would have done throughout the year into a jumbo issue that would provide the liquidity normally associated with the stuff that Uncle Sam puts out. Indeed, says David Moore, senior North American funding analyst at Ford Motor Credit Co.: “We’re becoming a more competitive alternative to Treasuries.”

Does the world really need such an alternative? Well, yes, because the Treasury market is shrinking. With the government rolling in cash, borrowing has already fallen, cutting the inventory of U.S. Treasury bonds. Treasury issuance has dropped from \$546 billion in 1995 to \$486 billion in 1998, and only \$191 billion has been issued so far this year. And if the Clinton Administration prevails in its plan to pay down the national debt, the instruments that have become the benchmark for all other lending—and a core asset in many portfolios—could disappear by 2015. “People have to start thinking of substitutes,” says Fares Noujaim, co-head of global capital markets at Bear, Stearns & Co. and global coordinator of the Ford deal.

To be sure, budget projections are



precarious at best, and few people think there will ever be zero Treasury debt. But still, declining liquidity in Treasuries is a concern, since one of the main virtues of the bonds for individuals, funds and corporate holders is their liquidity, which reduces risk.

The Administration seems to be blessing the notion of Treasury surrogates. “As the supply of Treasuries dwindles in the future... there would be a ready supply of securities of other issuers, including high-quality corporations and government-sponsored enterprises,” Stuart Eizenstat, the nominee for Deputy Treasury Secretary as-

sured Senate Finance Committee man William V. Roth Jr. (R-De) written testimony in early July.

Ford’s issue seems to fit the bill. The company had \$24 billion in cash at the end of its latest bond issue and earned a profit of \$2.5 billion in the second quarter. Ford typically issues \$12 billion a year in debt, mostly to finance dealer inventories, leases, and auto loans. This year is no different, except for the size and frequency of the bond sales. Ford’s approach is patterned after the benchmark bonds that Fannie Mae and Freddie Mac started last year, which are also aimed at providing a high-yield T-bond-like investment. Investors were so hungry for the Ford deal that the offering grew from \$6.5 billion to \$8.6 billion, and even then, the \$1 billion demand couldn’t be met.

“We hit a home run with this,” says David P. Cospers, treasurer of Ford Credit. In addition to gaining the prestige of creating a near-benchmark security, Ford saved money. By lumping what might have been four issues into one, Ford cut cost by some \$20 million.

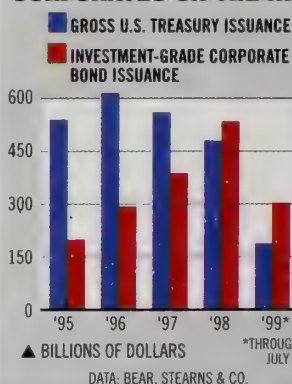
A SELECT GROUP. Still, there are questions about how well even the best corporate issues can substitute for Treasuries. A handful of companies, such as General Motors Acceptance, and General Electric Capital, have the credit rating and financial strength to issue large, global, and regularly scheduled bonds. And even with these issues, there is still greater credit risk than Treasuries. “What happens to a corporate benchmark if there is an economic crisis?” asks Marilyn Cohen, president of Envision Capital Management Inc., a fixed-income firm in Los Angeles.

Top-rated corporate debt has always proved resilient. Like Treasuries, it “weathers blips in the marketplace,” says Mark DeVito, managing director of capital markets at Merrill Lynch & Co. He notes that Ford issued a \$1.5 billion

batch of 30-year bonds last fall, when the market jitters were at their highest and other companies couldn’t get deals done. “Investors are willing to pay a premium for liquidity,” says DeVito. Without government running a surplus, they’re likely to be paying a premium for some time to come.

By Toddi Gutner
New York, with Ken Naughton in Detroit

CORPORATES ON THE RISE



What is "smart" technology?

MOTOROLA EMBEDDED SOLUTIONS

FINANCE

ARE T-BILLS Y2K INSURANCE?

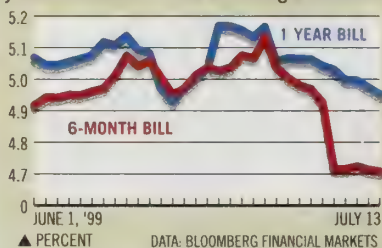
Investors brace for the bug by buying short-term Treasuries

Forget about stockpiling batteries in the basement. Now there's another commodity to stow away to get you through the turn of the millennium: short-term Treasury bills. Investors who want some extra protection—even if the global financial system doesn't melt down at the stroke of midnight on Dec. 31, 1999, as some Cassandras predict—are stockpiling T-bills just in case. "There's a basic presumption in the market that if the U.S. government isn't Y2K compliant, no one will be," says Neal M. Soss, an economist at Credit Suisse First Boston in New York.

Demand for the six-month T-bill is so heavy, it's pushing up prices. Yields, which move in the opposite direction of

Y2K EFFECT IN BONDS

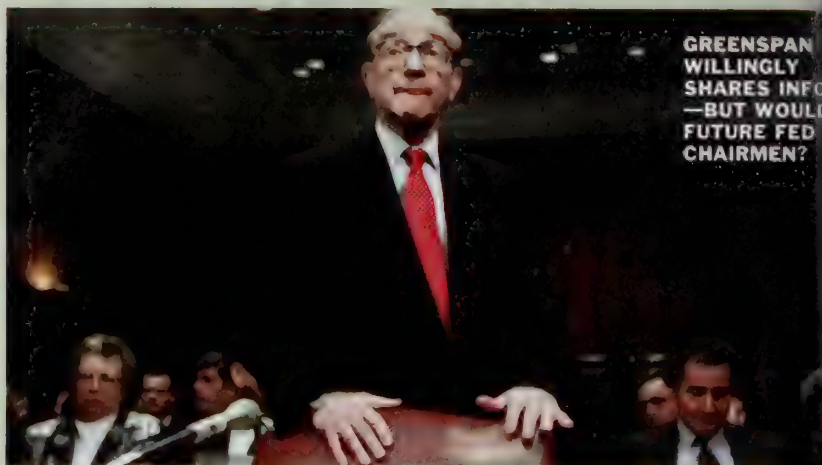
Investors looking to stay liquid in January are snapping up 6-month Treasury bills, pushing down yields relative to T-bills with longer maturities.



price, fell 44 basis points, to 4.70% during the first two weeks of July—taking a bigger plunge than other bonds, including one-year Treasuries (chart). Such a large move in a short period of time demonstrates that Y2K concerns are growing, says John E. Silvia, chief economist at Kemper Funds in Chicago.

Investor worries may be misplaced. U.S. regulators are optimistic that banks and other financial institutions will have their systems ready to usher in the New Year. Fed Governor Edward W. Kelley insists that the U.S. banking industry is "overwhelmingly ready." If he's wrong, investors who sought safety in Treasury bills will be prepared. Plus, the Fed has an extra \$50 billion in cash ready to provide liquidity, just in case. No matter, investors will sleep better between now and Jan. 2, 2000.

By Laura Cohn in Washington



GREENSPAN WILLINGLY SHARES INFO—BUT WOULD FUTURE FED CHAIRMEN?

COMMENTARY

By Laura Cohn

SOME RED TAPE IS WORTH KEEPING

When Alan Greenspan appears before the House Banking Committee on July 22, it could be a swan song of sorts for the 73-year-old Federal Reserve chairman. No, not that kind of swan song—friends say he relishes the idea of a possible reappointment next June.

Rather, July 22 could mark the last appearance by a Fed chairman as mandated by the Humphrey-Hawkins Act. That 1978 statute, which requires Fed chiefs to trudge up to the Hill to testify twice a year, is about to expire. That doesn't bother Senate Banking Committee Chairman Phil Gramm (R-Tex.) and other conservatives, who never liked the law's mandate that the Fed must make policy aimed at producing full employment.

If Congress fails to renew, the earth in Washington won't tremble. Greenspan has been one of the most open central bankers ever and would still heed requests for his testimony. But future Fed chiefs may not be so cooperative. That's why Congress should think twice before snuffing out the law.

MONETARY MANDARINS. To understand why Congress mandated appearances in the first place, recall the old Imperial Fed: a club of monetary mandarins that, liberals feared, was becoming a government unto itself. Nobody was more a target of the act than the late Arthur F. Burns, Fed chief from 1970 to 1978, who bristled at lawmakers' questions. He was fol-

lowed in August, 1979, by Paul A. Volcker, another prickly banker who believed that disclosure limited policy options.

Compared to them, Greenspan is model citizen, speaking his mind and pursuing pro-growth strategies. But he's the exception. Without Humphrey-Hawkins, there would be no regular forum for the world "to see that the Fed is thinking through what it's doing," warns University of Texas Professor James K. Galbraith who helped draft the act.

The thought of losing the Humphrey-Hawkins ritual has Wall Streeters aghast. "People plan their vacations around it," says Richard J. Yamarone, an economist at Argus Research Corp., a New York-based concern. "Taking away Humphrey-Hawkins would be like taking away the game plan."

Indeed, the Fed's report, released in February and July, gives everybody simultaneously a handy set of data on the economy and forecasts for growth, prices, unemployment, and money supply. That data, always presented in a consistent format, provides a clear view into what shaped the governors' thinking. Renewing the law in some form would ensure that a key part of Greenspan's legacy—greater openness—will continue. How about the Alan Greenspan Truth in Monetary Policy Act?

Cohn covers the Federal Reserve for BUSINESS WEEK in Washington.

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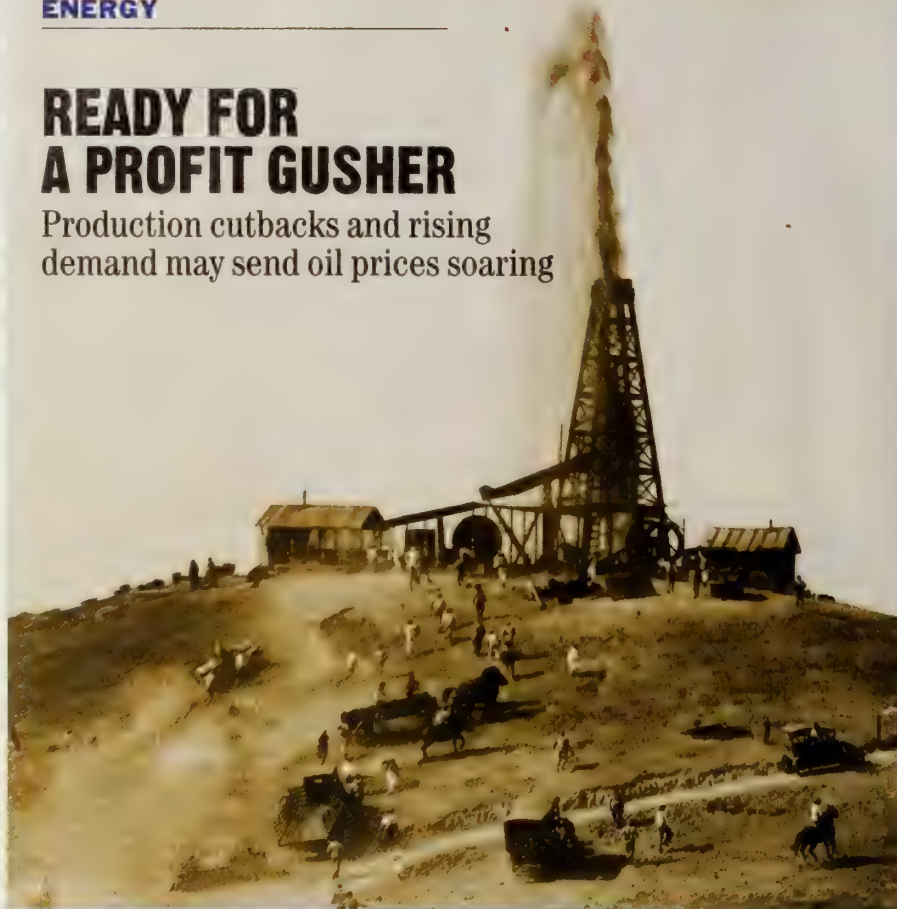
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ENERGY

READY FOR A PROFIT GUSHER

Production cutbacks and rising demand may send oil prices soaring



From oil glut to oil shortage? Not yet. But it seems clear that the success of the production cutbacks by the Organization of Petroleum Exporting Countries (OPEC) and the rebound in Asia's economies are likely to create a reversal of fortune for major oil producers in the coming months.

After watching earnings collapse in 1998 and the first two quarters of this year, Big Oil seems poised for a big comeback in the second half. Frederick P. Leuffer, an analyst at Bear, Stearns & Co. in New York, estimates that there will be an overall jump in profits of 85% in the third quarter for the top 16 companies and as much as 100% in the fourth. According to First Call Corp., a consensus of analysts' estimates puts earnings for the majors up 5% for 1999 and up 27% for 2000 (chart). "But I believe the analysts are being very conservative still," says Charles L. Hill, director of research for First Call. "They are basing these numbers on what I think may be lowball oil prices."

Oil's comeback has been primarily driven by improved supply and demand. On the supply side, there is a combination of production cutbacks by OPEC and Western companies. On the demand

side, there is increased consumption of petroleum products by Asia and the gas-guzzling U.S. economy. With demand currently outstripping supply by 1 million to 1.5 million barrels a day, stockpiles are likely to fall rapidly in the coming months, according to oil-industry estimates. "The industry's overhang in inventories is being worked off faster than a lot of people would have thought," says Kenneth Haley, manager of energy forecasting for Chevron Corp.

That, some analysts predict, could keep oil prices soaring. Already, the benchmark price of West Texas Intermediate has roared back from just under \$11 a barrel in December to break \$20 a barrel for the first time since late 1997. Robert L. Christensen Jr. of FAC/Equities, a division of First Albany Corp., is expecting prices for West Texas Intermediate to hit \$22 to \$23 a barrel in the second half of the year. But "There is a case for \$27-a-barrel oil," says Bear Stearns' Leuffer.

Such heady expectations have fueled a comeback for oil stocks. Amex index of the 16 leading companies is up almost 23% since the beginning of the year.

But will these stronger prices prompt the OPEC members to increase their output—as they have done in the past to capitalize on price spikes? Many observers believe they won't. This time, OPEC nations seem more united in their priorities. In May and June, "OPEC compliance was awfully strong—in the 90 to 94% area," Christensen notes. "They have a powerful policing force in the Persian Gulf."

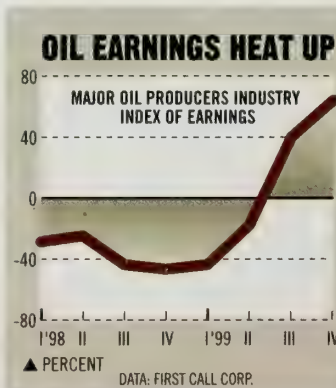
MASSIVE COST-CUTTING. Who? The top cops are erstwhile antagonists of Saudi Arabia and Iran—brought together by Iran's reformist President Mohammad Khatami and Saudi Arabia's Crown Prince Abdullah, who is grooming the Kingdom for his brother Fahd. At the same time, Venezuela's new President, Hugo Chavez, is expected to be supporting OPEC's efforts to raise oil prices, reversing his country's previous policy of setting its own production limits.

Meanwhile, major oil producers seem to be showing restraint by keeping a lid on exploration and development. And massive cost-cutting programs that the majors should help keep profits high, even if \$27-a-barrel oil doesn't appear. The recent round of megamergers was driven in large part by efforts to cut operating costs. BP Amoco, for instance, is pledging to take out some \$3 billion in costs by 2001, and it will be working on an additional \$1.5 billion in annual cuts once its takeover of ARCO is approved by regulators. The Dutch/Shell Group, which came under heavy fire earlier this year from financial markets, is working to cut away \$2.5 billion in annual costs by 2001.

It's a tricky balancing act for oil producers, who can do nicely if prices remain stable, at around \$20 a barrel. But to keep prices at that level will

require OPEC to tighten production quotas—a move that could create dissension in the ranks. Then again, stabilizing commodity prices is even more of an impossible dream than long-term OPEC unity.

By Stanley Ree
London, with
Zellner in Dallas
Louise Lee in
Mateo, Calif.

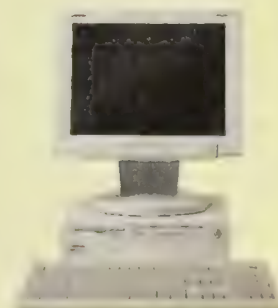




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SEMICONDUCTORS

FINALLY, THE PC-ON-A-CHIP —FOR LESS THAN \$100

But as National Semi launches its Geode, some wonder if it will fly

Since he took over National Semiconductor Corp. in 1996, CEO Brian L. Halla has waged a sometimes lonely crusade to create a "system on a chip"—cramming most of the functions of a PC onto one thumbnail-size sliver of silicon. Intel Corp. Chairman Andrew S. Grove dismissed it as a "fantasy," as did Wall Street. Even Halla wondered whether National could pull it off.

Now, perhaps, comes sweet vindication. Three years after Halla was recruited from LSI Logic Corp. to rescue ailing National Semiconductor, his PC-on-a-chip is finally real. On July 15, National plans to unveil the first member of its new Geode family, a chip with 7 million transistors that handle computing, graphics, audio, and even digital video. Halla hasn't revealed a price yet but says the chip will cost less than \$100, below the cost of all the parts it replaces. More important, it's far smaller and gobbles less electricity, which means it can be used to power all sorts of so-called "information appliances," from TV set-top boxes and wireless Web-cruisers to belt-buckle PCs.

Halla's timing is impeccable. With PC growth slowing, outfits ranging from Compaq Computer Corp. to Sony Corp. are scrambling to reach new customers, especially those who find conventional PCs too complex. Indeed, researcher International Data Corp. expects sales of info appliances to surge 59% per year for the next four years, hitting 56 million units worldwide in 2002. "In two years, you'll see these appliances everywhere," gushes Halla.

Some manufacturers are already on board. Thirty companies, including Acer, Grundig, and Chinese PC giant Legend have committed to build info appliances

CEO HALLA: "In two years, you'll see these appliances everywhere"

with National chips, and a further are near signing up; most are plan set-top boxes. The biggest win so Philips Electronics. Geode "fits well our road map," says Philips Vice-President Gerrit Niemeijer.

Halla has boasted that info-appliance sales could hit 600 million units a in the next decade. But Wall Street analysts aren't so sure. What's more, info appliances won't use the Intel-compatible chips that dominate in PCs; figures 75% of them will use cheaper alternatives from other manufacturers. "I just don't buy into the vision way National has pitched it," says analyst Scott Randall of SoundView Technology Group. He figures that Geode, which is expected to ship in early 2000, won't add much to National's sales in the current fiscal year and will amount to just \$220 million, or less than 10% of revenues, in 2001. Halla won't comment on the cutthroat. Since coming to National, Halla has spent a half-billion dollars snapping up companies whose technology is now appearing in Geode. The largest deal, the 1997 purchase of Cyrix Corp. for \$388 million, put National in the cutthroat PC-processor business. Its financial results tell the tale: Wars with Intel and Advanced Micro Devices Inc. helped trim revenue since 1997, and National has lost money in the past five quarters. Its stock price fell 42% in October, 1997, to as low as \$17.75 last fall. Now the stock is up 27%—for one reason: National is leading the PC-chip business. On May 5, National said it would stop selling processors, and on June 30, it announced a deal to sell Cyrix to Via Technology Inc. of Taiwan for an undisclosed sum. Now, analysts expect a return to profitability within two quarters.

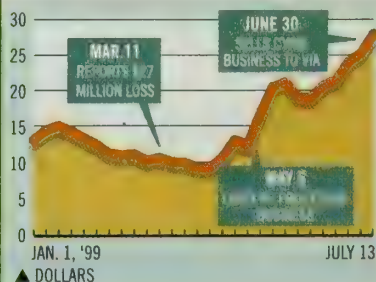
Still, the info-appliance strategy will provide competitive relief. Intel is making a combo chip, code-named Timex, which could appear a year after Geode. And analysts figure that Geode will have to sell for less than \$50 to gain market share, which could squeeze profits. But the great threat might be that consumers simply won't buy PCs—some which now come with Net service. Halla, that would find irony.

By Andy Reinhold
in Santa Clara, Ca

PROCESS THIS

Wall Street applauds National Semiconductor's retreat from the processor business

DATA: BLOOMBERG FINANCIAL MARKETS



LYWOOD

FUNNY THING HAPPENED THE WAY TO THE MULTIPLEX

summer, studios are discovering that less is more

Hollywood execs prepared for the summer of '99, they kept in mind his simple rule: If you still want to movie mogul in 2000, get out of the of George Lucas' *Star Wars: The Phantom Menace*. Even Stanley Kubrick, who died in March, had the right to insist that his last film, *Eyes Wide Shut*, open well after the *Star Wars* prequel's June release.

Tinseltown's delight, the strategy paid off in spades—for movies with ter- reviews. While *The Phantom Menace* is scheduled for the outer reaches of \$400 million at box office, other films are getting a good share of that could be a blockbuster summer. Through July, other films have done more than \$100 million. New Line Cinema has a surprisingly hit on its hands with the Austin Powers sequel, *The Spy Who Shagged Me*, which has right in close to \$200 million. Walt Disney Co.'s highly acclaimed animated feature, *Tarzan*, is already at \$130 million. Even the universally loved *Wild Wild West* is going fast on \$100 million.

THING ROOM. All in the take is up 28% last year, says Paul Arabedian, president of box-office analyst Exhibitor Relations Co. And on far fewer films: the first 10 weeks of season, the larger ones released 18—10 fewer than last year, according to Exhibitor Relations. That may be the most important statistic behind Hollywood's Summer of

Success. Rather than squaring off against big-budget blockbusters coming out on each others' heels over just a few weekends, the studios were able to stay out of one another's way. "If you want to get noticed, it's always easier if you're the only one out there," says Jeff Blake, who heads Sony Corp.'s film-distribution unit. Sony's Adam Sandler hit, *Big Daddy*—again, with less-than-mediocre re-

Tickets, Please

NOW PLAYING

PHANTOM MENACE The big winner so far: On its way past \$400 million.

AUSTIN POWERS: *THE SPY WHO SHAGGED ME* New Line Cinema is close to snagging \$200 million for the Mike Meyers romp.

TARZAN Disney's animated hit has passed \$130 million.

BIG DADDY Sony's Adam Sandler comedy has broken \$100 million.

SOUTH PARK Paramount and Warner Bros. share profits on this low-budget winner.

WILD WILD WEST Warner is about to break \$100 million on this critically panned action flick.



EYES WIDE SHUT



TARZAN



AUSTIN POWERS



SOUTH PARK



THE PHANTOM MENACE

COMING SOON

INSPECTOR GADGET

To tap the kiddie market, Disney is offering this special-effects-laden adventure, starring Matthew Broderick. Opens July 23.

EYES WIDE SHUT Massive hype, plus stars Tom Cruise and Nicole Kidman, should propel Warner's \$65 million film, director Stanley Kubrick's last. Opens July 16.

RUNAWAY BRIDE *Pretty Woman* costars Julia Roberts and Richard Gere team up again in this romantic comedy from Paramount. Opens July 30.

views—was the only one to open on June 25 and was able to pass the \$100 million mark in a mere 10 days.

It might be too much to expect Hollywood to show this much self-restraint in moviemaking for long—although right now, studio chiefs are looking downright cheap. A wave of cost-cutting has swept the industry of late, with major studios like Disney and Warner Bros. Inc. cutting back on production or seeking partners to share the financial risk of making bigger-budget flicks. In the past several days, Arnold Schwarzenegger signed to make a film that will be jointly financed by Warner and Universal Studios Inc. "All of this has to help studios' cash flow, and it will," says John Tinker, a media analyst at Banc of

America Securities.

Not only did Hollywood make fewer films in total, it scaled back dramatically on big-budget action movies—once the staple of summer moviegoing. That gave those movies that got made a better chance against *The Phantom Menace*.

One big winner: Universal's *The Mummy*, released three weeks before Lucas' film, has already grossed more than \$150 million.

CLASH OF TITANS. Still, there could be a few head-on collisions before Labor Day—23 films are still set to open. One to watch for: Nicole Kidman and hubby Tom Cruise in Warner's much-anticipated *Eyes Wide Shut*, vs. Julia Roberts and her *Pretty Woman* co-star, Richard Gere, in Paramount Pictures Inc.'s *Runaway Bride*.

So the new Hollywood doesn't sound all that different from the old one. But if the major studios heed the lesson that you can make more money by making fewer films, the industry just might discover a new motto to live by: Less is more. What a concept.

By Ronald Givens in Los Angeles

EDITED BY MARK FRANKEL

INTEL: NOT JUST A BAG OF CHIPS

SO WHAT IF PRICE WARS IN PC chips limited Intel's second-quarter profit growth to a mere 49%? The chip giant is looking to the future, assuring Wall Street that it will do better in the second half and moving further into non-PC lines. On July 15, the company planned to unveil a new unit that will sell high-speed consumer modems. Intel will license digital subscriber line (DSL) technology from Cisco Systems and sell co-branded DSL modems, mostly through Internet service providers. That's good news for investors concerned about Intel's near-total dependence on PC processors—cited as one reason its profits came in be-

low expectations, even though they looked healthy compared to last year's depressed June quarter.

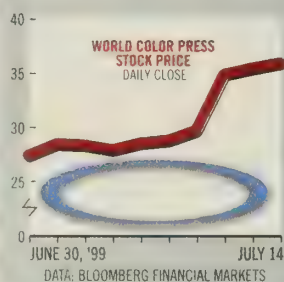
LOCKHEED MARTIN'S ENDANGERED SPECIES

WILL WASHINGTON CLIP THE wings of Lockheed Martin's newest bird? On July 12, a House appropriations subcommittee voted to kill production money for the company's F-22 Raptor, an Air Force fighter program expected to cost \$63 billion. But the F-22 could fly yet. The Senate has backed funding for the plane, and a furious lobbying effort may save it. But the vote signals growing Capitol Hill dissatisfaction with Pentagon plans for three new tactical aircraft at a cost of \$350 billion. At least one of these programs may be quashed.

CLOSING BELL

PRINTING MONEY

Stop the presses: Montreal's Quebecor Printing agreed to acquire World Color Press of Greenwich, Conn., on July 12 for \$2.7 billion in cash and debt assumption. Quebecor World will be the world's largest commercial printer, with revenues of \$6.2 billion. Operationally, it's a "very good deal," says Blaise Ganguin of Standard & Poor's. But, citing Quebecor's \$3.2 billion debt load, S&P lowered the printer's debt rating. World Color's stock rose 20% after the deal was unveiled; it closed at 35¹¹/₁₆ on July 14.



HOUSECLEANING AT WASTE MANAGEMENT

ON JULY 13, WASTE MANAGEMENT launched an investigation into insider selling by top executives during the second quarter—when the No. 1 trash hauler was developing a serious earnings shortfall. The probe will be handled by a new executive board committee chaired by outside director Ralph Whitworth, who was also named acting chairman while CEO John Drury recovers from surgery. In early July, Waste Management said second-quarter revenue would be \$250 million lower than anticipated. It now says the shortfall was the result of "aggressive" projections.

A MURDER RAP IN THE VALUJET CRASH

MURDER CHARGES ARE ALMOST never brought against companies. But state and federal

HEADLINER: HERBERT ALLISON JR.

WARMER AND FUZZIER, PLEASE

Wanted: executive to fill the No. 2 slot at Merrill Lynch. On July 11, in a move that surprised Wall Street, Herbert Allison Jr., Merrill's president and chief operating officer, quit after 28 years. Allison, 55, had been heir apparent to CEO David Komansky since 1997, when he became top lieutenant, but was told recently that he would not take over the reins when his 66-year-old boss retires.

Some inside Merrill, known for its chummy ambience, expressed relief that the not-warm-and-fuzzy Allison would not be the boss. "Allison is not a person who

gives praise easily or who builds up people around him," says a former senior exec, who asked not to be named. Allison did not return calls.



Next? A new heir apparent won't be named soon, Merrill insiders say. Komansky, a former broker, is expected

to tap several top guns from Merrill's executive management committee and see who prevails. Among the contenders: Jeffrey Peek, head of Merrill's Asset Management Group, and CFO Stanley O'Neal. Whoever wins had better practice their back-slapping.

By Debra Span

prosecutors on July 13 charged SabreTech, an aircraft maintenance contractor, with third-degree felony murder and manslaughter in connection with the May, 1996, crash of a ValuJet Airlines flight that killed 110 passengers and crew. Prosecutors asserted that the company improperly packed oxygen canisters into the jet's cargo hold that caused the plane to catch fire. A SabreTech spokesman said that the crash resulted from "a chain of human errors," and that the company lacked criminal intent.

TIME WARNER ROCKS TO AN ONLINE BEAT

TIME WARNER CHAIRMAN Gerald Levin has long expressed his certainty that the Internet will transform the music business more than any other. On July 14, with Time Warner partner Sony, he put

those beliefs to the test when he announced an alliance aimed at turning their Columbia House record collection into a hot Web play. After a planned merger with lead online music seller CDNOW, Time Warner and Sony each own 37% of a new, still-unnamed public company. Sony and Warner, two of the top music producers, now in the position to duke it out in the online sales market with Amazon.com and eMusic.

ET CETERA...

- Excite@Home announced it will buy Web merchant iMall for \$415 million.
- Schlumberger will merge offshore drilling operations with Transocean Offshore.
- The White House raised Russia's quota for launching U.S. satellites from 16 to 20.
- Egghead.com and OnSight agreed to merge in a \$400 million stock swap.

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JE WALCZAK

AN DOLLAR BILL GO BEYOND UNCY DRIBBLING?

can run, shoot, and handle the ball, all right. But can he in the big game? Thus far in his bid for the Democratic nomination, Bill Bradley has executed his underdog's gy well. The former New York Knicks star is raising big —\$12 million vs. Vice-President Al Gore's \$18 million. campaigning on broad themes, which some voters seem gard as a refreshing counterpoint to Gore's numbing nt plans. And by buttonholing Democrats one-on-one in rimary states, Bradley is beginning to impress political brokers with his breakaway potential. uble is, it's still just potential. For all of ertions, Bradley still garners only 26% rt in Iowa in the latest *Des Moines* ter poll and 32% in the July 8-12 New shire Poll. Not bad, but to hit the big the former New Jersey senator has to new dimension to his offense. Here's the political pros look for:

Gore's Attention. Right now, the Vice-ident ignores Bradley and acts as if he in a general election contest with GOP runner George W. Bush. The Veep is ting the GOP's "risky tax schemes" and g to paint Bush as beholden to the gun and religious zealots.

t if Bradley's Democratic support edges the danger zone—say, 40%—Gore will need to wage a two-front war. In essence, ey needs those potshots from Gore to show activists he's e same stage as the Veep.

ow the Contrast: Bradley dismisses Gore as a small-pol and professes a loftier vision. Yet the differences slight. For instance, Bradley has unveiled a plan to er handguns, outlaw cheap pistols, and ban gun shops residential neighborhoods. Within days, Gore issued his call for stiffer licensing requirements. "Bradley doesn't guish himself clearly from Gore," says Drake Univer-

sity political scientist Hugh Winebrenner. "It's his biggest problem."

Bradley is working on that. On July 22, he'll unveil a plan to curb special-interest money in politics. Bradley refuses political action committee cash, wants to ban unrestricted "soft money" gifts, and may back public subsidies in exchange for spending caps. "Gore won't be able to match this," says an aide. Bradley plans to follow up this fall with calls for a new child-care system and universal health care—initiatives unburdened by Gore's need to actually cost out his programs.

■ **Burrow Into the Base.** Bradley is big with independents. But most don't vote in primaries. That means he must cut into Gore's institutional support with activists such as teachers, minorities, and union members.

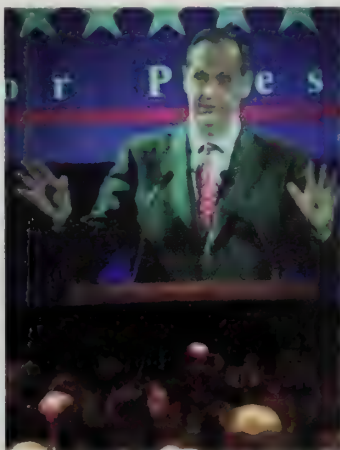
Bradley is reaching out to blacks by vowing to make racial reconciliation a top priority. And he's wooing labor, especially industrial unionists who dislike the Administration's free-trade policy. "We think labor is in play," says Bradley spokesman Eric Hauser.

■ **Build Infrastructure.** Bradley's strategy rests on wounding Gore early in Iowa or New Hampshire, then finishing him off Mar. 7 in New York and California. But pros can't discern much of a Bradley campaign outside the first two states. Unless he builds one, the

compression of the nominating calendar into the first eight weeks of the year could make him another Gary Hart. In 1984, Hart wounded Walter F. Mondale in New Hampshire but lacked the organization elsewhere to capitalize.

Can Bradley do all these things while running an unconventional campaign that, at times, seems more like a Zen meditation than a television-age crusade? Insiders say no—but then, Bradley has proven the cognoscenti wrong so far.

With Richard S. Dunham and Lorraine Woellert



BRADLEY: *Champ fund-raiser*

CAPITAL WRAPUP

ALTERING THE TAX SHELTERS

Clinton Administration efforts to k down on corporate tax shelters n doomed for the year. House ws & Means Chairman Bill Archer (ex.) effectively buried the initia- by announcing his panel won't n hold hearings until fall, consid- l too late to include a broad crack- n in any tax measure this year. eed, GOP tax bills include provisions tax-shelter critics say will expand avoidance opportunities, especially multinational corporations.

TARGETING AIRPORT SLOTS

► First they went after Big Tobacco, then Microsoft Corp. Now, state attorneys general are eyeing airlines. Thirty-one AGs back Senate Commerce Chairman John McCain's (R-Ariz.) bill to boost landing and takeoff slots for low-cost carriers at big airports dominated by the majors. The goal: cheaper service to smaller cities. The AGs' decision to back the bill, which could go to the Senate floor as early as Aug. 1, is part of a larger antitrust review of airline practices. Litigation is possible.

CHAMBER: RESUME CUBA TRADE

► The drive to ease the U.S. trade embargo on Cuba could get a big boost from the July 13-15 visit there by U.S. Chamber of Commerce President Thomas J. Donohue. He met with Cuban entrepreneurs and was scheduled to sit down with Fidel Castro on July 14. The Chamber opposes U.S. sanctions on Cuba. To strengthen Cuban-U.S. business ties, Donohue will organize a group of Cuban entrepreneurs and Chamber officials, and hopes to open a Havana office.

INDONESIA'S KINGMAKER

Army chief Wiranto has brokered a deal. The upshot: Megawati's in, Habibie's out—and Wiranto's in charge



He speaks softly but wields great power, a general whom Indonesia's soldiers follow and whom civilians respect—and fear. He is central to Indonesia's political drama and its eventual economic recovery. Yet throughout the tumult of Indonesia's legislative elections in June and their aftermath, no one knew how Armed Forces Commander-in-Chief Wiranto would act. Would he stand aloof from the post-election jockeying for President? Or would he preserve the Army's traditional support of Golkar, the party that backed Suharto, and his successor, B.J. Habibie?

Well, the General has finally inter-

vened. On July 7 and 8, Wiranto summoned top generals to a "commanders call," say army officers who attended and government officials briefed later. The meetings took place at Indonesia's Armed Forces Headquarters, a sprawl of barracks and bunkers on the leafy outskirts of Jakarta. Several provincial military commanders were invited, as well as five of Wiranto's top generals based in Jakarta. Excluded from the table were those generals who favor an Islamic state and back President Habibie. The agenda: to hammer out plans for Indonesia's next government.

Wiranto's muscular men in green uni-

forms deliberated for two days, then granted their commander full support to put together a coalition government—and whatever role in it he chooses. The most likely lineup expected to be announced in the next few weeks: popular opposition leader Megawati Sukarnoputri as President, and Wiranto himself as the truly powerful Vice President. And current President Habibie? He's out at the end of his term. Wiranto, according to the sources, even secured the blessing of ex-President Suharto. Wiranto and his aides are now trying to cement the details of the deal, which could still run into trouble if

actionary parties—and Habibie himself—won't fall into line. The final vote is due on July 21. At the moment, Wiranto's plan has the edge.

It's not exactly democracy. Wiranto's play is sure to disgust many voters, but with the military an always-omnipotent force in Indonesian politics, the most powerful general in the country to emerge at the helm could result in the most stable government Indonesia could hope for. After all, the economy is embarked on the first stages of recovery that needs a stable environment to thrive. And since none of the major parties was on the way to winning a clear mandate, a shaky coalition looked likely.

Even the popular Megawati, whose Indonesian Democratic Party-Struggle is leading all others with roughly 35% of the vote, has not garnered enough to win a solid majority. And a complicated electoral process threatened to cheat her out of presidency during elections in October. Megawati is not going to be President. There's going to be chaos in this country," says Jusuf Wanandi, director of the Center for Strategic & International Studies (CSIS), a Jakarta think tank. It's why Wiranto stepped into the vacuum, offering himself as compromise candidate and kingmaker. A concern of the generals was whether Megawati would agree to the arrangement. Yet Megawati knows that a politician can be President without the military's backing. And even students indicate they could accept the compromise if it resulted in a Megawati presidency. Says Pius Lustrilang, who led a radical student group before running for office under Megawati: "I don't know. But the power between pro-Habibie and pro-Megawati forces is balanced, so finally it rests on who the military wants."

THE VERDICT. So the generals decided. Wiranto should be either President or Vice President, and he should ask Megawati—as the biggest vote-getter in the election—to assume the other office. Talks with Megawati about the arrangement were still under way as early as July 14. The popular daughter of Indonesia's first President since independence, Sukarno, she has been silent since the polls closed on June 7.

Wiranto has also sought the blessing of his mentor, Suharto. Even after his fall from power, Suharto wields considerable influence among Indonesia's military. A former general, Suharto's word is still needed in the upper reaches of the military. And under Indonesia's age-old system of patronage, Wiranto still seeks Suharto's advice before making major decisions, according to his aides. "When he held absolute power for 33 years,

you don't lose it all in just one year," says a finance industry source also close to Suharto.

So at their meeting on July 8, Suharto gave Wiranto his blessing to proceed. In return, Wiranto gave Suharto a tacit assurance that he would be pardoned, and may not even stand trial, for three decades of corruption under his rule. Wiranto and Suharto, with the studied calm and low voices characteristic of the Javanese elite, also reached an understanding that no vigorous attempts to uncover Suharto's billions would be made, according to an army officer familiar with the discussion. And Suharto quietly indicated that Habibie should not stay on for a second term, according to the insiders.

If Wiranto pulls off this arrangement, it's still unclear whether he will emerge as a strongman in the mold of Suharto or actually solidify Indonesia's fledgling

The army chief sought his mentor, Suharto's, blessing before taking on the army's usual role of behind-the-scenes arbiter

him as a man who plays his cards close to his chest and often refuses to answer questions directly. Indeed, like Suharto at the beginning of his national career, little is known about Wiranto. He was not available for an interview. But he has said that the military would not remain neutral in the election. And his aides say he supports a policy of

gradually separating the military from its traditional "dual function" role as a political and military one.

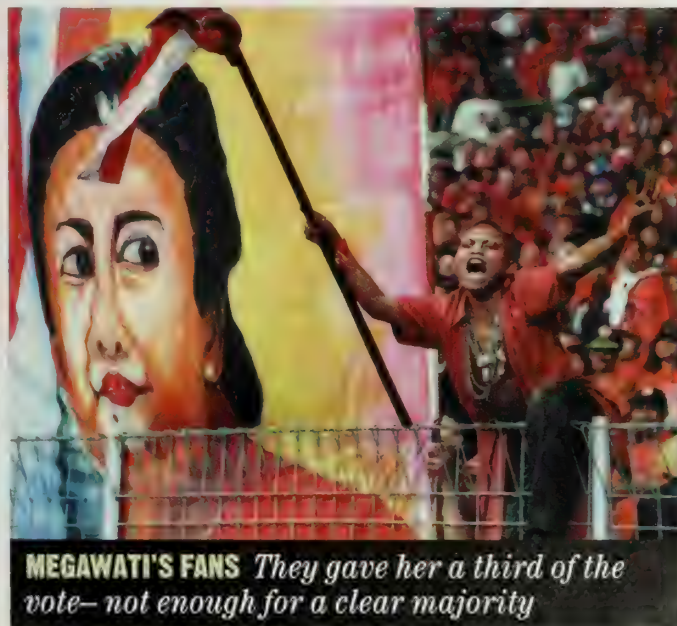
NO PROBE. Wiranto harbors no illusions about the Indonesian military's poor human-rights record. But his aides say he does not believe in investigating abuses by the military. He has said an investigation would only destabilize the army at a time when he's trying to hold it together. But critics say Wiranto is merely avoiding a Pandora's box that would implicate his loyal generals.

Little is known, too, about Wiranto's economic policies. After consolidating power, economic matters are next. Lieutenant General Bambang Yudhoyono, who is tipped as Wiranto's successor as head of the military, says Wiranto would seek to appoint an economic council of civilian experts to "find a comprehensive solution for the Indonesian economy."

Indonesia's fragile recovery can only last if the

country avoids the kind of unrest and violence that characterized the end of Suharto's reign. If Megawati, Habibie—and the Indonesian public—accept Wiranto as both kingmaker and compromiser, that could happen. A similar deal between Corazon Aquino and General Fidel Ramos calmed the Philippines after a tumultuous period in the 1980s. "People are harking toward some political figure who shows proven stability and focus," says Education Minister Juwono Sudarsono, a respected political scientist. Wiranto just might be the man.

By Michael Shari in Jakarta, with Sheri Prasso in New York



democracy. Much depends on the acquiescence of Habibie, who has indicated he might not accept being left out of the coalition. Habibie, like Wiranto, has long had a close relationship with Suharto.

But it is Wiranto who is most like Suharto. Suharto recruited him as his aide-de-camp in 1989 and promoted him to armed forces commander-in-chief shortly before riots forced his resignation. "This was not just a purely professional [relationship]," observes Harold Crouch, an Indonesia expert at Australian National University in Canberra. "Wiranto was part of the extended family."

Those who know Wiranto describe

SOUTH KOREA

SO MUCH FOR REFORM

Why the Hyundai-LG merger isn't likely to be imitated

At 10 p.m. on July 7, Hyundai Electronics Industries Co. finally got its deal. The Korean chipmaker formally acquired rival LG Semicon for \$5.4 billion, after more than a year of political intrigue and clan rivalry. The result: the world's biggest maker of memory chips.

It would be nice to imagine that this acquisition is the beginning of a trend. After all, South Korean President Kim Dae Jung has told *chaebol* chiefs that they must sell off their less competitive divisions and focus operations. Only that way, says Kim, will Korea Inc. regain its health and foster new areas of growth. But far from being the first of its kind, the LG-Hyundai deal may be the only one of its kind. Top *chaebol* executives are balking at further deals as President Kim's political strength slips. With industrial production up to pre-crisis levels, the biggest *chaebol* see no need for more mergers.

Of course, overcapacity still plagues the economy, and many *chaebol* divisions remain in the red. But *chaebol* executives see the sale of any asset to a rival as a humiliation. And they will fight to avoid that dishonor, as LG's top managers did in the LG-Hyundai deal. Indeed, the merger panned out only because of the enormous pressure the *chaebol* all felt during the darkest days of the crisis. And the chip industry, plagued by overcapacity and a price collapse, was ripe for a shakeup.

PRESIDENTIAL SUMMONS. So in September, 1998, the Federation of Korean Industries recommended that LG and Hyundai merge their semiconductor operations. It brought in U.S. consulting firm Arthur D. Little Inc. to decide which partner should be the dominant player. But the day before the only scheduled ADL visit to its semiconductor

factories, LG canceled the trip, says Taesoo Jung, director-in-charge of Arthur D. Little's Seoul branch. In December, an ADL team found that Hyundai was the stronger player and should buy LG's chip assets. LG executives were furious.

Alarmed, Kim Dae Jung summoned LG Group Chairman Koo Bon Moo and Hyundai Electronics Chairman Chung Mong Hun to the presidential Blue House on Jan. 6. There LG's Koo surprised the President by agreeing to end resistance and give up the chip business.

The next day, LG's executive in charge of restructuring, Kang Yu Sig, and Hyundai Electronics President Kim Young Hwan signed an agreement to wrap up the deal by Jan. 31.

Yet when negotiations started in earnest, LG asked for \$5.63 a share, more than six times what the stock was selling for when the deal was announced. By asking for such a high price, the company could stall for time and hope that the political pressure would ease enough for LG to walk away from the merger agreement.

So the January deadline came and went with little progress. The next

target was Feb. 25, the first anniversary of Kim Dae Jung's inauguration. The government turned to its Corporate Restructuring Coordination Committee to mediate. On Feb. 20, LG's investment bankers argued before the committee that the company was being forced to sell at the bottom of the highly cyclical semiconductor business. But Hyundai's

Even though shareholders gain, LG executives see the deal as a loss of face



A NEW CHIP GIANT

SIZE

The merger between Hyundai Electronics and LG Semicon creates the biggest DRAM chipmaker in the world, with combined sales of \$2.8 billion and global market share of 23%.

WORKERS

Total employment is 17,000. Hyundai has promised not to cut any LG staff for two years.

RESEARCH

Combined company will have 3,600 researchers and a budget of \$300 million.

DATA: COMPANY REPORTS

bankers countered that the business would require much higher investment than LG projected. Feb. 25 passed without an agreement, and LG continued to demand more than four times what Hyundai offered.

In stepped the powerful head of Financial Supervisory Commission, Hun Jai. Lee started investigating reports of stock manipulation by the Chung family, the clan that controls Hyundai. He also said he would cut bank loans to whichever party was blocking the deal. That did the trick. "[price] gap narrowed," says an LG Semiconductor board member. On April 1, the two chairmen, Koo and Chung, agreed to a deal. LG executives had declined to comment, but sources say the sale has deeply upset their chairman. "I feel like a loser," an associate says Koo told him.

For Hyundai, the hard work is beginning. On July 8, Hyundai Electronics President Kim headed for plants to shore up morale. Kim says that he doesn't expect any layoffs among plant or R&D staff. "I assure them that the jobs were theirs to lose," says Kim. Perhaps. But Korea Inc. is already losing something—the momentum for reform.

By Mark L. Clifford, with Jennifer Veale, in Seoul

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SPENT: Worn-out brokers have problems making sense the market

ARGENTINA

SWEATING IN BUENOS AIRES

Now, investors are asking 'What else can go wrong?'

Once again, the remarks of a rebellious politician set off a rout in Latin America's financial markets. On July 12, after Argentine presidential candidate Eduardo Duhalde said he would ask Pope John Paul II to support a one-year moratorium on foreign debt payments, Argentine stocks and bonds plunged: The Buenos Aires bolsa fell by 9%. Markets around the region quickly followed. The near-panic was similar to what occurred in Brazil in January, when a state governor announced that he wouldn't pay debt owed to the federal government. A week later, Brazil was forced into a chaotic devaluation that sent investors racing for the exits.

Argentina does not look as if it will unravel imminently. The day following the sell-off, the stock market rallied when investment banks, including Salomon Smith Barney and Lehman Brothers Inc., discouraged clients from pulling out and after Duhalde appeared to backtrack. Furthermore, Buenos Aires has \$27 billion in currency reserves—more than enough to stave off a speculative attack on the peso. The country also has a \$2.8 billion line of credit available from the International Monetary Fund. "There was an over-reaction in an already nervous market,"

explained Economy Minister Roque Fernández. Perhaps. But the economy is in a precarious position, and it could worsen in coming weeks and months. The lame-duck government of President Carlos Saúl Menem must fund a budget deficit expected to exceed \$5

billion this year—1.7% of GDP. That will be tough. Recession-weary Argentines are fed up with tax increases and spending cuts. Investors are increasingly reluctant to buy Argentine debt. Adding to the uncertainty is the campaign for October's presidential election. Menem, who has pushed Argentina into the global economy, is leaving office after ten years. The leading contenders to replace him—Fernando de la Rúa, the mayor of Buenos Aires and candidate of the opposition Alliance, and Duhalde, who is a Peronist—have unsettled investors by wavering in their commitment to open markets

and fiscal austerity. Under Argentina's currency board system, in which each peso in circulation is backed by reserves, the government does not adjust monetary policy. That makes fiscal discipline essential to market credibility.

Meanwhile, Argentina's second recession in four years is expected to shrink the economy by 2% to 3% this year. Unemployment is now approaching 15%. Exports, hurt by Brazil's 33% devaluation and low commodity prices, will drop 15% or so, to \$22 billion. The automotive industry, which accounts for 13.5% of national output, is reeling. Fears are growing that the country might be forced to devalue the peso. But Menem and both candidates insist that they won't.

Menem, as a strategy for discouraging currency speculators, has promoted adoption of the U.S. dollar as the na-

tion's currency. The thinking is speculators would leave Argentina since there would in effect be no currency to attack. However, dollarization would not resolve the budget deficit and it wouldn't eliminate the 800-point premium over U.S. Treasuries investment now demand on Argentine bonds.

In fact, Argentina already is dollarized. Under the currency board, the peso and dollar are exchanged everywhere, from banks to restaurants. Prices are set with the dollar as a reference, and more than half of all deposits are in greenbacks. Duhalde and De la Rúa say they favor the board, but both have dodged the question of dollarization to avoid being seen as stealing the idea from Menem. Talks with the U.S. on adopting the dollar will be stalled at least until the next President takes office in December.

THE BIG PICTURE. But Duhalde's remarks have raised a longer-term concern: Argentina pay off its debt, which grew to \$140 billion this year, from a billion two years ago? At a July 13 auction, the Treasury gave investors much as five percentage points more than a month earlier. Argentina, which has issued \$8 billion worth of paper abroad this year, is Latin America's leading foreign borrower. Its 6-to-1 debt-to-export ratio is the region's highest. A \$500 million debt swap in Buenos Aires was postponed on July 14 because

market turmoil. "This is an inopportune time," says Treasury Secretary Pablo E. Guidotti. "The market is expensive."

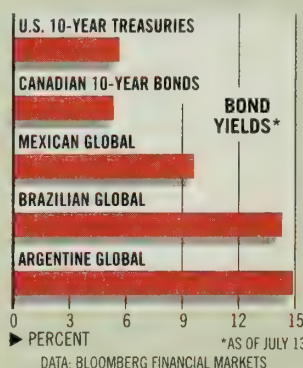
Argentina still has time to wriggle out of its predicament. But it will have to cut spending to appease the markets. It could also use the crisis as a rallying point to push stalled measures that investors and the IMF have urged for years. One is the proposed "fiscal convertibility law." It would

limit public spending and debt and create a rainy day fund to soften the blow of future financial crises. Menem could also revive reform of inflexible labor laws. "Labor reform is the big one," says Abel Viglione, an economist at FIEL, a Buenos Aires think tank.

With the populace restless and investors skeptical, the government must act boldly or risk handing over a country in turmoil to a new President.

By Ian Katz in São Paulo

INVESTOR JITTERS OVER ARGENTINA





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EDITED BY PAUL MAGNUSSON

WHY SYRIA'S ASSAD MAY BE READY TO DEAL

Syría's President Hafez al-Assad and recently elected Israeli Prime Minister Ehud Barak haven't exactly formed a mutual admiration society. But an exchange of respectful statements between the two leaders suggests that a solution to the toughest part of the Arab-Israeli conflict could be near. In the past, Syria resisted Middle East deals and blocked wider peace in the region. But now, the Syrians are publicly calling for talks to end 50 years of hostilities.

Several currents seem to be pushing Syria. Assad, 68, and reportedly in ill health, may want to wrap up a deal soon. The Syrians see Barak as a man they can do business with, in contrast with his hard-line predecessor, Benjamin Netanyahu. "The Syrians thought all Israeli Prime Ministers were equally bad, but Netanyahu taught them a lesson," says Rosemary Hollis, head of Middle East programs at the Royal Institute of International Affairs in London.

ECONOMIC WOES. A likely deal would see Israel pulling back from the Golan Heights, which it occupied in 1967, in exchange for peace. Buffer zones and monitoring, possibly involving the U.S., would be arranged. Israel would also expect Syria to use its influence with the Hezbollah guerrillas to calm Israel's border with Lebanon. That would allow Barak to achieve his goal of pulling Israeli troops out of South Lebanon, where ambushes and bombs have killed 39 Israeli soldiers in the past 18 months.

Assad would probably like to spare his son and possible successor, Beshar, the difficulty of making such a peace. Beshar originally trained to be an ophthalmologist until Assad brought him home from Britain and pushed him through a series of high-profile military positions following the death of Beshar's brother, Basel, in a car wreck in 1994. Beshar, 34, is undoubtedly a soft peach compared with his father, who deals ruthlessly with any challengers. A divisive peace ini-

tiative after the father's passing might not sit well with military and intelligence commanders whose support Barak would need to maintain control.

Assad has other reasons for wanting to make peace. Staggering military expenditures have left the Syrian economy among the most stagnant in the region, with annual income per capita only about \$1,000. The government owes \$20 billion—much of it to Russia, and a drought is ruining Syria's grain production. Yet Assad can expect little aid from the West until he makes peace.

Although settling differences with Israel may seem logical for Assad, it is by no means an easy deal. He takes his role as defender of Arab lands seriously and can be expected to bargain hard. While Barak seems to accept that he will have to return the Golan, much remains to be decided on minor territorial adjustments, timing, and monitoring. If the talks, which could start by late summer, get stuck, Assad could use Lebanon's Hezbollah militia, which he influences, to put pressure on Israel. **WIDE REACH.** Yet Syria is not the power it used to be. After the cold war ended and Syria's key supporter, the Soviet Union, collapsed, the country's military strength declined. Arab nationalist Baath regime has become something of an anachronism.

Still, an Israeli-Syria deal could have a far-reaching impact. If Syria, Israel's most implacable foe, drops its hostility, everyone else in the region would have a green light to do the same, and some of the steam would be taken out of hard-line Palestinian groups, such as Hamas. There are already signs that Iran would accept a Syrian-Israeli deal. The region's peoples, who have endured decades of poverty and dictatorship, just may have a shot at something better.

By Stanley Reed in London
with Neal Sandler in Jerusalem



ASSAD: Sparing his heir?

GLOBAL WRAPUP

SETBACK FOR IRAN'S KHATAMI

► The violent clashes between pro-democracy demonstrators and security forces in Iran threaten President Mohammed Khatami's promising reform effort. Khatami, who was elected in 1997, has a long-term strategy of gradually opening up the political system and restoring Iran to a more normal status in the world. He has already vastly improved relations with Saudi Arabia and restored diplomatic ties with Britain. Cultural exchanges with the U.S. are under

way, and some observers thought Iran's relations with the U.S. might be normalized after the U.S. Presidential election in 2000.

The troubles began escalating after security forces and regime hard-liners overreacted to student protests over the closing of a moderate newspaper. Security forces and regime hard-liners staged a raid on the dormitories of the University of Tehran on July 9, beating up students. The students defended themselves, and the situation degenerated into a pitched battle on July 13.

The violence has left the two sides

polarized. The big question is whether Khatami can play peacemaker.

Khatami also has to persuade the more radical advocates of reform to give him time. Continued clashes could lead to a brutal crackdown reminiscent of the Tiananmen Square putsch in China in 1989.

"In a confrontation between reform and repression, the forces of repression have all the muscle," says Gary Sick, an Iran specialist at Columbia University in New York. The riots are abating for now, but Iran's troubles as it moves toward reform have only begun.

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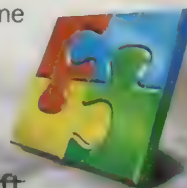


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MAD AVE: A STAR IS REBORN

But can Charlotte Beers bring back the glory days at J. Walter Thompson?

At the May luncheon of the Ad Club of New York, the big news didn't have anything to do with the latest advertising trends. The real buzz concerned the return of one of the ad world's most popular and influential figures. Seated at the J. Walter Thompson Co. table was Charlotte Beers, the most powerful woman ever to work on Madison Avenue, who has recently come out of retirement to take the chairman's job at JWT. Beers's presence was a keynote event. Two of the day's three speakers interrupted their prepared remarks to welcome her back. "[She's] one of the old guard," says Burt Manning, 68, ex-JWT chairman and an advisor with the American Association of Advertising Agencies, known as the Four A's. "Back to do what we do best."

That's the hope of JWT, and by extension much of the industry as it scrambles to remain relevant at a time when traditional notions of how to market products to consumers are undergoing rapid and radical change. Nowhere is the fallout from that change more apparent than at J. Walter Thompson, a 135-year-old agency that helped to invent the very concept of modern advertising. But these days, its influence is on the wane. Facing pressure from upstart Internet agencies, specialized consulting firms,

and even their own clients, who are increasingly orchestrating their own branding strategies, agencies like JWT are losing clout with customers.

That's where Beers comes in. An industry veteran known for her glamorous friends—Martha Stewart and Ellen Burstyn are pals—and her ability to cement client relationships, Beers has been lured back from emeritus status to take the chair at Thompson, where she began her advertising career 30 years

ago as a lowly assistant account executive. It's a challenge Beers, 63, didn't need to take on. She retired in 1997 after a long and triumphant career that included the turnaround of ad agency Ogilvy & Mather Worldwide Inc. in the '80s, the top slot at Chicago-based agency Euro RSCG Tatham, and a stint as the first woman to head the Four A's.

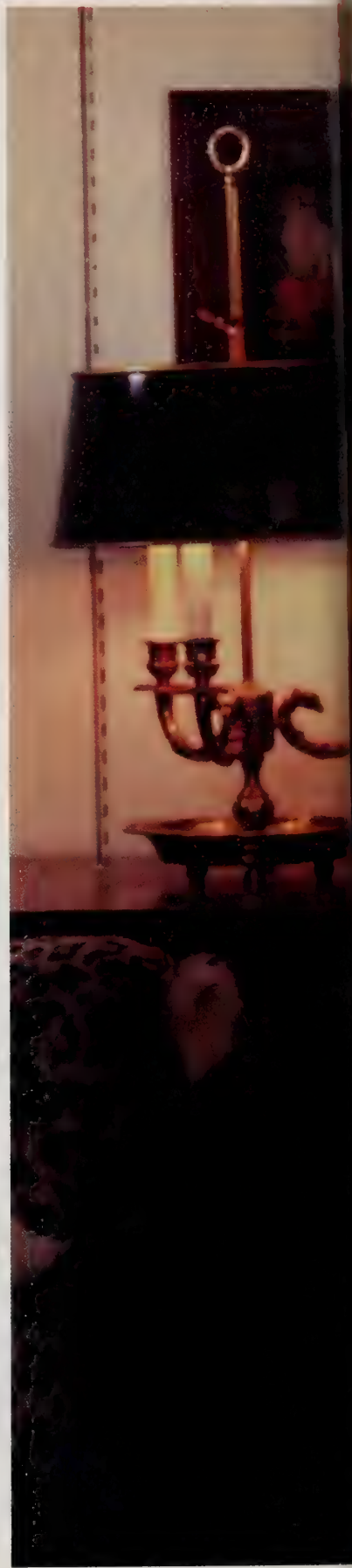
Beers brings to her latest job decades of experience during Madison Avenue's glory days in the '70s and '80s. The obvious question: In an age when clients are demanding an array of marketing techniques that barely existed when Beers entered the business, is she the right person to reinvent the traditional ad agency? To many in the industry, her ascension signals a return to the days when the ad agency was the guardian and steward of the client's

LOW STANDING

Asked to rank marketing tactics in order of importance, only 10% of senior executives put advertising at the top

PRODUCT DEVELOPMENT	29.4%
STRATEGIC PLANNING	26.8
PUBLIC RELATIONS	15.5
RESEARCH & DEVELOPMENT	14.0
FINANCIAL STRATEGIES	13.6
ADVERTISING	10.3
LEGAL	3.4

DATA: AMERICAN ADVERTISING FEDERATION



FOCUS ON THE BIG PICTURE:

Beers says Thompson needs to convince clients that the agency is the best caretaker of the brand

brand. But some marketing experts are less sure. "This is either the new beginning or the last dance of the dinosaurs," says Sam Craig, professor of marketing and international business at New York University.

The Queen of Madison Avenue faces a twofold task: She must keep old clients satisfied with the traditional services at Thompson while simultaneously inspiring the firm to rethink its mission. From her Queen Anne-furnished office in Thompson's Manhattan headquarters, Beers is attempting to recast JWT as master brand strategist. She's crafting a detailed mission statement for the firm. To bolster the new Thompson, she's aggressively recruiting talent in hot areas such as Internet and entertainment marketing. She brought in Mary Baglivo, CEO of a Chicago ad agency, as chief marketing officer to burnish the Thompson brand and sell the new vision to both staff and clients. "We are being called upon to articulate a vision for our time. That's not a strategy, it's a context for the future," Beers says. "I'm here as part of true period of reinvention."

Thompson is still a master at what used to be the most prized form of advertising—the TV commercial. It boasts in its archives such classics as Maxwell House coffee's "good to the last drop" and Rice Krispies' "snap, crackle, and pop" campaigns. But Thompson is less well known for what is currently in hot demand by companies: brand building. That's the broader construction of a product's image and associations. It may involve direct marketing, licensing, sponsorships, public relations—whatever it takes to connect with consumers.

"MAP CHANGE." As a result, Beers leads a company that is one of the biggest and best at what is now just a slice of a much broader marketing pie. Longtime agency consultant Alvin Achenbaum estimates that 20 years ago, companies devoted 90% of their marketing budgets to advertising and the rest to other promotional efforts. Today, advertis-

ing commands maybe a third of the budget. "That's quite a map change," he says.

Meanwhile, even Thompson's vaunted ad business is taking some hits. Although JWT gained such clients as Merrill Lynch and Qwest Communications International Inc. in the past year, it has also lost some biggies, such as Sprint and Dell Computers. JWT is holding steady financially. Parent company WPP Group PLC doesn't break out results for the agency, but revenue last year rose 8.3%, to \$414 million, according to *Advertising Age*. Still, the client defections are worrisome. "We need to send the clear message that we are the best caretakers of brands," Beers says.

Months before she accepted the new job, WPP Group Chief Executive Martin Sorrell had already enlisted Beers as

JWT's Bumpy Road

JANUARY, 1997 Chris Jones becomes CEO.



JUNE, 1997, TO DECEMBER, 1998

Eastman Kodak, Sprint, and Dell pull accounts worth \$290 million* from JWT.

OCTOBER, 1997

New York CEO Susan Gianinno and World-

wide Creative Director Helene Spivak resign.

EARLY 1998 WPP Group CEO Martin Sorrell makes Charlotte Beers unofficial counsel to Jones.

MARCH, 1999 Beers joins JWT as chair, pushing a plan called Total Branding to reinvigorate firm. Jones retains CEO title.

SPRING, 1999 JWT secures new accounts, including Kimberly-Clark, Qwest, and Elizabeth Arden, totaling \$600 million.

* All numbers in total billings. Actual revenue to agency is approximately 15% of billings.

DATA: BW RESEARCH

ad hoc counsel to Thompson's Christopher Jones, 43, as he wrestles to retain the firm's grip on big-name clients. But if Beers sees herself as ad world's Michael Jordan, lured out of retirement to reenergize team league, she isn't letting on. She's quick in almost every encounter to bill her efforts as a duet with Jones. "Working together allows us to bring our different strengths to the job, philosophical and operational," she says. Jones concedes but adds: "Charlotte is not here to run JWT. I run JWT." And until last winter, Beers was essentially out of the business, happily walking her white toy poodle on a Florida beach and contemplating a book project.

It's no huge surprise that Beers is not ready to retire. Divorced, with a grown daughter, she's been career-driven for most of her life. The grand piano she bought herself as a retirement present sits in her living room untouched because Beers could never quite squeeze time for lessons, even after she supposedly ratcheted down her hectic schedule. Friends like financier Darla Moore say Beers couldn't resist a challenge to the reinvigoration of JWT. "I'm not surprised. It's just the sort of thing she'd be attracted to," says Moore.

DRILL TEAM. Stories of Beers's ability to charm clients abound, from the time she wowed the Sears, Roebuck & Co. team by casually assembling a power duo during an account pitch to her role teaming with Ogilvy exec Shell Lazarus to lure the entire \$500-million IBM account to Ogilvy. A smooth talker with a dry sense of humor and a hint of her native Texas drawl still intact, she objects to her reputation as one of Madison Avenue's all-time best schmoozers. "Makes it sound like all the important work I do is just about eating lunch and playing golf," she says. Beers insists it is her vision for brand stewardship that makes her popular with clients. Yet her charm is most closely associated with her success. "People like Charlotte; clients know her. It's no small thing in a business where relationships are so important," says Allen Rose, head of rival agency BBDO Worldwide in New York.

Her crowning achievement was turning beleaguered Ogilvy and turning it into a powerhouse. But more than just bringing in new business, what industry watchers most remember about her Ogilvy years was her introduction of something called Brand Stewardship. It's a map for turning an ad agency into the total manager of a company's brand. Beers has championed a similar pro-

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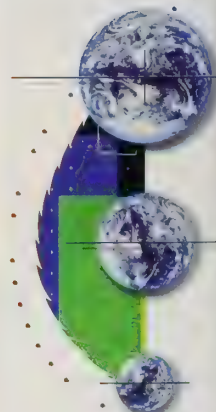
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at JWT, called Thompson Total ing. Her efforts today are drawing praise and skepticism. "It's what I want, for sure, but it's not something you can do quickly," says Alan Siegel, CEO of Siegel & Gale, a consultancy specializing in brand building. Perhaps not, but Beers, who tends to view the world in terms of brand strategies, brings a passion to the effort. She attributes the success of her father's TV show, *Law & Order*, for example, to good brand management that's given the series a clear identity. "That's why it's survived so many cast changes," she says. Beers wants JWT to accomplish the same thing for clients. "At the end of the day, I don't want them to say 'You give us the best service' or 'You give us the most award-winning advertising,'" she says. "I want them to say, 'We don't dare take that away from Thompson.'"

NATIONAL LINK. Plenty of other ad agencies are fighting the same battle, as the industry becomes increasingly marginalized in the marketing universe. At the meeting of the American Advertising Federation, major corporate clients stunned their ad agencies by ranking advertising sixth out of seven

CHARLOTTE BEERS

BORN July 26, 1935, in Beaumont, Tex. Daughter of an oilman

EDUCATION Baylor University, degrees in physics and math

FIRST AD GIG Assistant Account Executive, J. Walter Thompson, 1969

LATEST AD GIG Chairman, JWT, 1999

BIGGEST COUP Snaring the \$500 million IBM account while Ogilvy & Mather CEO in 1995

WHAT SHE SAYS IS HER GREATEST JOB SKILL Creating emotional context for brands

WHAT COLLEAGUES SAY IS HER GREATEST JOB SKILL Schmoozing big corporate clients

FAVORITE PASTIME Attending New York City theater

LAST BOOK READ *The Golden Bowl*, by Henry James

marketing strategies, trailed only by legal counsel. Sixth. While not openly hostile to their agencies, it's clear that companies no longer consider traditional advertising as crucial.

How did the masters of promotion fail overwhelmingly to promote themselves? By failing to change with their clients. Over the past decade, corporations have taken the concept of brand building to a new level that TV commercials only partially address. Clients want to give their products the kind of emotional connection with consumers that has equated Coca-Cola with refreshment, Jaguar with luxury, and Disney with family entertainment. Ads helped to create those images, but the actual consumer experience, the sponsorships, and other forms of marketing were just as important. "Ads build awareness. That's only part of the package today," says Sergio Zyman, chairman of the Z Group, a consulting firm, and former ad chief for Coca-Cola Co.

These days, the need to break through the clutter and reach the consumer has spawned the rise of the marketing consultant as brand builder. By offering specialized services such as event marketing or licensing, the con-

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June 16.....Frankfurt, Germany	July 20.....Stamford, CT	Aug. 17.....Paramus, NJ
June 23.....New York City #2	July 22.....Morristown, NJ	Sep. 16.....Atlanta, GA*
June 24.....Buffalo, NY	July 27.....Long Island, NY	Oct. 2.....Championship, New York City
June 29.....Boston, MA	July 28.....New York City #3	

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ing industry has wooed once-loyal agency clients. They've convinced many to spread their trust and marketing dollars around, leaving agencies in the lurch. Not of brand steward but of service. The consulting firms have also done a better job attracting top talent to their firms with higher salaries and the chance to work in disciplines that were perceived as more cutting-edge. The profession doesn't have the sex appeal it had when I started way back in," says Manning. "All the kids in the Internet and management-consulting fever."

INTERNET NEWBIE. In fact, the Internet is a particular threat to traditional agencies such as Thompson. In addition to luring away young, talented minds, it has admittedly a mystery to veterans like us. Kevin Wassang left a new-media production company to join JWT earlier this year as director of digital communications. He points proudly to the colorful new iMacs and other Internet tools in the agency's offices. "Six months ago, it wasn't anything like this," he says. Another of Thompson's newly hired Internet experts recently gave Beers a briefing on the digital advertising the agency designed for Merrill Lynch. "It's



TEAM EFFORT

British-born JWT CEO Christopher Jones says his international experience complements Beers's bulging Rolodex of top-level American contacts

a totally new vocabulary for me," says Beers. But while Beers is on the learning curve, upstart Internet firms are sprinting ahead to carve yet another slice from the marketing communications pie (page 64).

Beers faces another threat from an unlikely source: her own clients. Advertisers have increasingly come to believe that brand management is too crucial to entrust to an outsider. At a recent

presentation to Kellogg Co. for the relaunch of breakfast cereal Smart Start, Thompson Group Creative Director Alan Plantt made a pitch steeped in Beers's concept of Total Branding. The campaign, including striking photography, direct marketing, even giant billboards, went over beautifully. But as the meeting broke up, Fred Jacques, Kellogg Co.'s ad chief, made it clear that he sees the agency's job as buttressing a strategy that he and his team control. "Brand strategy is my job," says Jacques. "We get to 90%—we look to our agency to get us over the line."

Even at Ogilvy, where Beers was

large chemical company needed an ERP solution, called Compaq Services, had 2 years out from its projected schedule, saved millions



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hailed for creating a brand-strategy blueprint, few clients look to the agency to be the primary brand steward. Long-time Ogilvy client American Express, for example, turns to Ogilvy for TV commercials and print ads, including its popular Jerry Seinfeld campaign. But responsibility for the overall AmEx brand is handled in-house, says John D. Hayes, executive vice-president for global advertising and brand management at AmEx. "Your brand has to live inside your company," he says. "We hire partners who best suit our needs, not ones to do everything."

Even JWT's happiest clients are eating into the agency's pie. Merrill Lynch's Charles V. Mangano, head of brand management, says his firm is thrilled with the ad work JWT has produced this year. But who is the brand strategist? "That aspect is developed in-house," he says. "We were impressed at how well J. Walter came in and picked up on the strategy we have for our brand."

That doesn't faze Beers, who's moving quickly on all fronts to revamp Thompson. By the end of the year, Beers's vision statement will be translated to video and shown to JWT's entire worldwide staff of more than 8,000. She's also working to attract new expertise. Marina Hahn, an expert in entertainment marketing, was recently lured from the talent firm William Morris Agency Inc., where she crafted movie tie-ins for clients such as Tommy Hilfiger Corp. Now she'll develop similar programs for clients such as Unilever PLC. "We are all about transforming the ad agency business," she says. "I'm not here to worry about 30-second commercials."

Neither is Beers, who leaves much of the day-to-day client meetings and projects to the vast JWT staff, putting her time into big-picture efforts such as last month's retreat for high-level staffers and broad strategy discussions with clients. Already, things are looking up. Even if clients aren't ready to hand

over brand strategy to the agency, are ready to give it some of their business. So far this year, Thompson attracted \$645 million in new billing—roughly \$90 million in revenues—accounts from Ragu, Kimberly-Clark and others.

Despite those gains, however, Beers's broader goal of repositioning the agency as overall brand strategist remains a long shot. It's clear that Beers can't billings for her firm, thanks to the bulging Rolodex and unparalleled ability to woo business, but even her supporters wonder if she can fundamentally expand the role of the ad agency. "Building is bigger now than the industry that invented it," says Achenbaum. "But it may well be that despite their best efforts, ad agencies will never again be the sole guardians of brand image, but simply part of a larger marketing army. And that will be a hard role to play for the members of the old guard."

By Ellen Neuborne in New York

THE SHAPE OF THINGS TO COME.COM?

Chan Suh, a 37-year-old Korean native raised in New York and Paris, heads a Manhattan-based ad agency, but he couldn't be further from Madison Avenue. He has never shot a TV commercial or created a glossy magazine ad. Instead, the firm he founded, Agency.com, specializes in the new—and fast-growing—world of online marketing.

At the ripe age of 4, Agency.com is the biggest and one of the oldest of the online agencies. It had revenues of about \$80 million last year, up from \$15 million in 1997. Started in 1995 with two employees, it now boasts a staff of 750—with a median age of 28. Ranked No. 47 on Advertising Age's list of U.S. agencies, its client roster includes Lipton, British Airways, and Texaco.

ZEN RETREAT. With a mix of marketing and technology services, Agency.com offers a decidedly '90s spin on advertising. About one-third of the firm's work is purely technical, such as coordinating a company's various computer functions and creating databases. On the marketing side, Agency.com has handled everything from creating a corporate Web site for Metropolitan Life Insurance Co. to creating online promotions for the Almond Board of California to elec-



"To see the emergence of companies like ours is not to see the death of JWT"

CHAN SUH

Agency.com CEO

tronic media buying and planning for Bank of America.

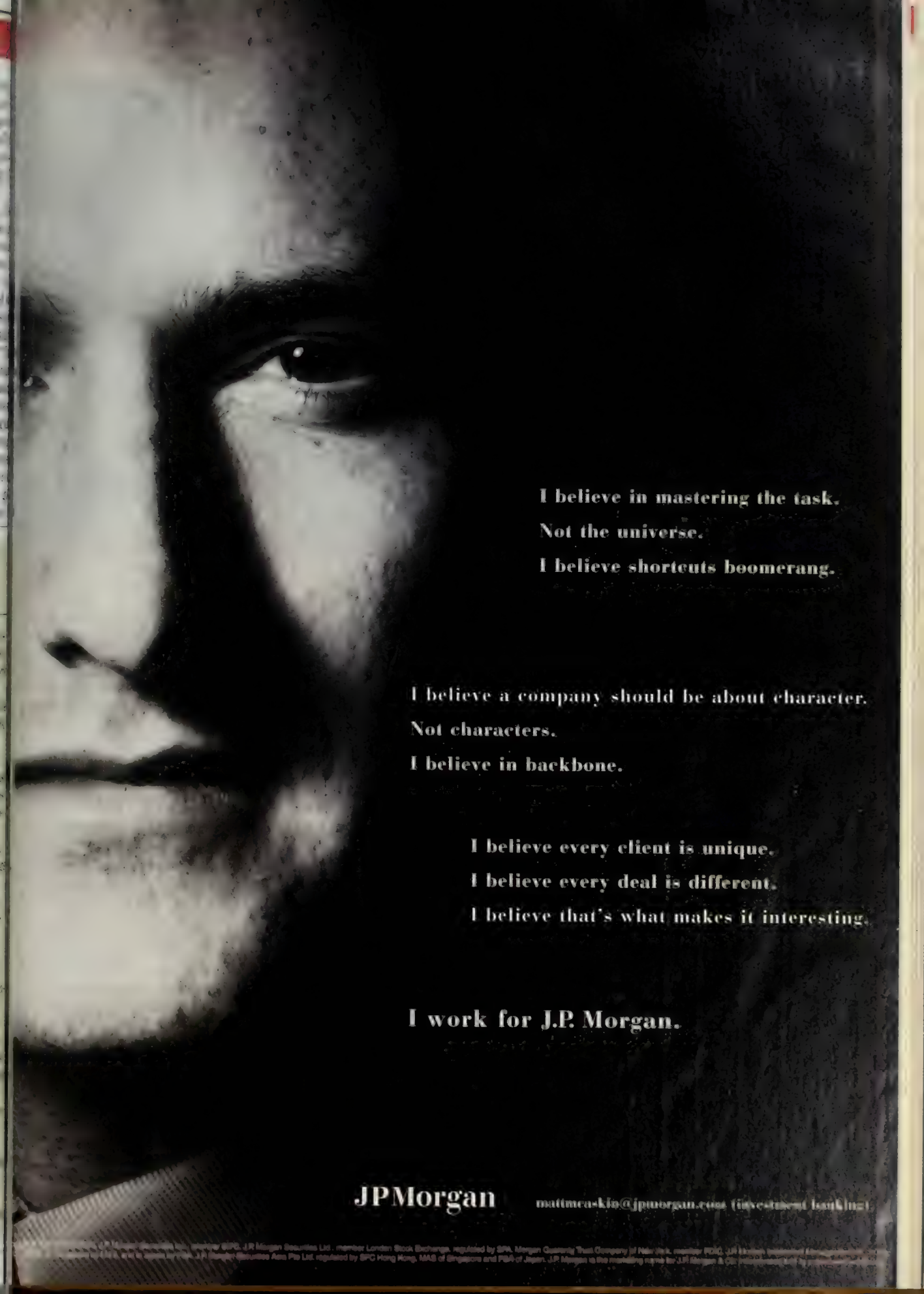
To make that combination work, Chan insists that technologists, strategists, and marketers work side by side—though they can retreat to private "zen" rooms for solitude. Teams collaborate throughout the process, from pitch to production to

launch. "When they have to live together like that, they're more likely to come up with solutions that work in concert," he says.

Chan's is a tough program for the big Madison Avenue types to knock off, he boasts. For one, change at Agency.com is a way of life. The shared work spaces arrived just last year. Later this summer, the offices will move to a new space, complete with doors made of chalkboard for on-the-spot brainstorming and idea jotting. "When I don't change things, people say, 'Hey, what's going on around here?'" he says.

But Chan is not about to declare his type of agency the victor over the traditional shops. He does not envision the eclipse of Madison Avenue. "To see the emergence of companies like ours is not to see the death of a company like JWT. It doesn't work that way," he says. At the same time that the Internet has been on the rise, other mediums such as newspapers and magazines have also shown great gains. "It does precipitate challenge for the previous generation. In 100 years, we'll run into the same issues." Until then, it's Chan's turn to be the brash young upstart.

By Ellen Neuborne in New York



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I believe shortcuts boomerang.**

**I believe a company should be about character.
Not characters.
I believe in backbone.**

**I believe every client is unique.
I believe every deal is different.
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EMPIRE BUILDERS

AN AMBITION AS BIG AS TEXAS

Tom Hicks is molding a media dynasty the hard way

After his Dallas Stars won the National Hockey League championship last month, buyout king Thomas O. Hicks donned a fine pair of custom cowboy boots featuring a shiny silver Stanley Cup embroidered on each shin. As sweet a victory as that might have been for Hicks, who also owns the Texas Rangers baseball club, you'd think it would pale next to the relief he felt on July 13.

On that day, shareholders of Chancellor Media Corp., the Dallas-based radio giant backed by his Hicks, Muse, Tate & Furst Inc., approved the \$4.1 billion buyout of sister company Capstar Broadcasting Corp. The last time Hicks had tried to fold a related company, LIN Television Corp., into Chancellor, shareholders balked at the terms of the deal, and it was called off in March. In fact, that was just one of several costly about-faces Hicks led Chancellor through over the past year.

But now, renamed AMFM Inc., the company boasts \$2 billion in revenues and 465 stations, making it the country's largest radio operator. And Hicks, chairman and chief executive at both AMFM and Hicks Muse, seems unfazed by all the upheaval. "We're the biggest, the baddest, and the best," he crows.

Hicks will need his Texas moxie to fulfill his vision of building a multi-tentacled media and sports empire. Having raised \$10.5 billion from investors in the past decade, Hicks Muse has made its backers plenty of money by following a "buy-and-build" strategy of assembling undervalued companies, bulking them up, and then selling them. The fund has taken stakes in everything from Chef Boyardee canned pastas to printed circuit boards. But media is where the firm is placing its biggest bets—\$4.2 billion worth in all. "The common thread about all media assets is that they have strong, inherent top-line growth, very little

capital expenditures, **CHAMP:** Hicks and lots of free cash flow," says Hicks. *has winning hockey and ball clubs*

Beyond AMFM, through a range of companies (table, page 68), Hicks is exploring everything from a regional sports network airing games of the teams he personally owns to increasing Hicks Muse's ownership of TV stations and extending the firm's reach in Latin America. But if it's all going to work, Hicks is going to have to manage his fast-growing web of investments and partnerships better.

FALSE STARTS. If there are traits emerging in the tall, 53-year-old Texas native, one is financial savvy. But another is a cowboy's penchant for duels. In several instances, Hicks Muse has launched major deals and then abandoned them, such as its planned acquisition of book-publishing assets from Pearson PLC. These turnabouts have left fuming partners and two lawsuits in the wake. (Hicks says the suits are without merit.) He's now dealing with scandal and feuding at his biggest Latin American investment. And some of his moves at AMFM, including putting the company up for sale in January, only to change his mind in March, have spooked Wall Street and clouded AMFM's prospects.

Although it has risen of late, AMFM stock, at 54%, is trading at the same level as a year ago, compared with a 20% rise at rival Clear Channel Communications Inc. Shares of Infinite Broadcasting Corp., the radio giant cor-



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trolled by CBS Corp., have climbed 42% since Infinity went public in October.

A year ago, the former Chancellor was on an \$8 billion buying binge in pursuit of a multimedia strategy featuring radio, television, and outdoor advertising. But as Chancellor's stock began to sink under the weight of its debt load, Hicks replaced cable-TV veteran Jeffrey A. Marcus as CEO in what one insider describes as a "palace revolt." (Marcus remains an AMFM director.) At the same time, shareholders bristled at Hicks Muse's tendency to pay itself merchant banking fees when combining assets it owns. That led to the LIN deal being called off.

The plan to fold Capstar into Chancellor was similarly imperiled until early July, when Hicks Muse scaled back its demand for a \$31.7 million cash fee. Instead, Hicks Muse received \$10 million in cash and a five-year option to buy shares at \$52—but only if the stock trades at \$100 or higher for 30 straight days. "Everybody's on the same page now," says Storm Boswick, a managing director at J&W Seligman & Co., which owns about 5 million AMFM shares and was one of the leading blockers of the LIN deal.

Despite AMFM's recent fumbles, Hicks boldly predicts he will double that company's size and nearly quadruple its stock price to "at least \$200" a share, in five years. Backed by strong radio industry and economic fundamentals, Hicks figures he can attract more advertising by capitalizing on AMFM's base of 66 million listeners and by launching Internet broadcasting ventures, including a prospective partnership with America Online Inc.

After unloading its billboard assets and putting in place management led by Vice-Chairman James E. de Castro, a well-regarded industry veteran, investors feel confident about AMFM's direction. "I think they finally have the right assets and the right management team to start creating some real value for investors," says Ron Sachs, a portfolio manager with Janus Capital Corp., one of AMFM's largest shareholders.

ARREST WARRANT. If not, some investors say they expect the company could soon be merged with a rival, such as Clear Channel, or a broadcaster, such

as NBC. Not surprisingly, Tom Hicks doesn't see it that way. "We have no plans of merging [AMFM] with anyone in the next six months or the next six years," he says.

For the time being, Hicks might have his hands full in Latin America. In a market seen as risky but ripe for development by savvy investors, Hicks Muse plans to invest up to \$1.5 billion in television, radio, and cable companies. "Latin America is one of the most dynamic media opportunities I've ever seen," gushes Hicks.

But on the eve of July 13, Hicks was

heading to Argentina to try and out fires at CEI Citicorp Holdings. Hicks Muse plunked down \$590 million to control the holding company with pay-TV, cable, and telecommunication interests. Now, he finds himself wrestling with a company whose former chairman and CEO has a war outstanding for his arrest on charges related to a bank's collapse. And Hicks and Telefónica de España—CEI's partner in Argentina's largest phone company—are openly sparring over the direction of the phone company.

Less contentious is Hicks's newest foray: regional sports networks, both in North and South America. In the coming weeks, sources say, look for Hicks to invest more than \$300 million in new Spanish-language sports networks with an emphasis on soccer rights. The interest in sports has grown since 1998, when Hicks personally shepherded out \$84 million to buy the luckless and money-losing Las Stars.

"CAN'T HELP MYSELF." Two years later, he paid down \$250 million to acquire the Texas Rangers baseball team. The teams' owners, a rodeo company he acquired, were recently rolled up into newly formed Southwest Sports Group Inc., which also includes the television station in the Las Vegas area that holds Rangers broadcast rights and the soon-to-be-created regional sports network. That ownership, in addition to a partnership in a new sports arena under development in Dallas, could give Hicks a lock on valuable rights to promote local sports programming.

Hicks says that he's negotiating with Fox Sports and ESPN to develop the network and expects to have the project off the ground within a few months. "Everything I've ever done in private equity investments has been according to buy and build. That's my strength. I can't help myself," says Hicks. Nor, apparently, can he help avoiding controversy. However, anyone who expects to make Dallas into the continental hockey capital is not to be underestimated.

By Stephanie Anderson Furst, based in Dallas, with Richard Siklos in New York and bureaus

HICKS MUSE'S GROWING EMPIRE

Media and sports holdings of the buyout firm and its boss

U.S. HOLDINGS

AMFM INC. 465 radio stations

26% owned; \$1.3 billion invested

LIN HOLDINGS TV stations, including 13 network affiliates in major markets

69% owned; \$409 million invested

SUNRISE TELEVISION 16 network-affiliated TV stations in midsize markets

87% owned; \$110 million invested

MAJOR LATIN AMERICAN HOLDINGS

CEI CITICORP HOLDINGS Argentina's leading telecommunications, pay-TV, and media company

40% owned; \$590 million invested

GRUPO MVS Mexico City-based diversified media firm with assets in pay-TV, TV, and radio

23% owned; \$120 million invested

IBERO-AMERICAN MEDIA PARTNERS Fund formed in 1998 with Venezuela's Cisneros Group to buy content and broadcast properties in Spanish- and Portuguese-speaking countries

50% owned; \$250 million committed

PAN-AMERICAN SPORTS NETWORK Regional cable sports network with emphasis on soccer teams and rights

80% owned; \$420 million committed

INTERNATIONAL OUTDOOR ADVERTISING Formed in 1998, now the largest billboard company in Argentina, Chile, and Uruguay

97% owned; \$100 million committed

TOM HICKS'S PERSONAL HOLDINGS

SOUTHWEST SPORTS GROUP INC. Owns NHL's Dallas Stars, MLB's Texas Rangers, Mesquite Rodeo, Channel 39 in Dallas, and soon-to-be-created regional sports network

70% owned by Tom Hicks, the rest owned by private investors, including several Hicks Muse partners; \$344 million invested

DATA: HICKS, MUSE, TATE & FURST, BUSINESS WEEK

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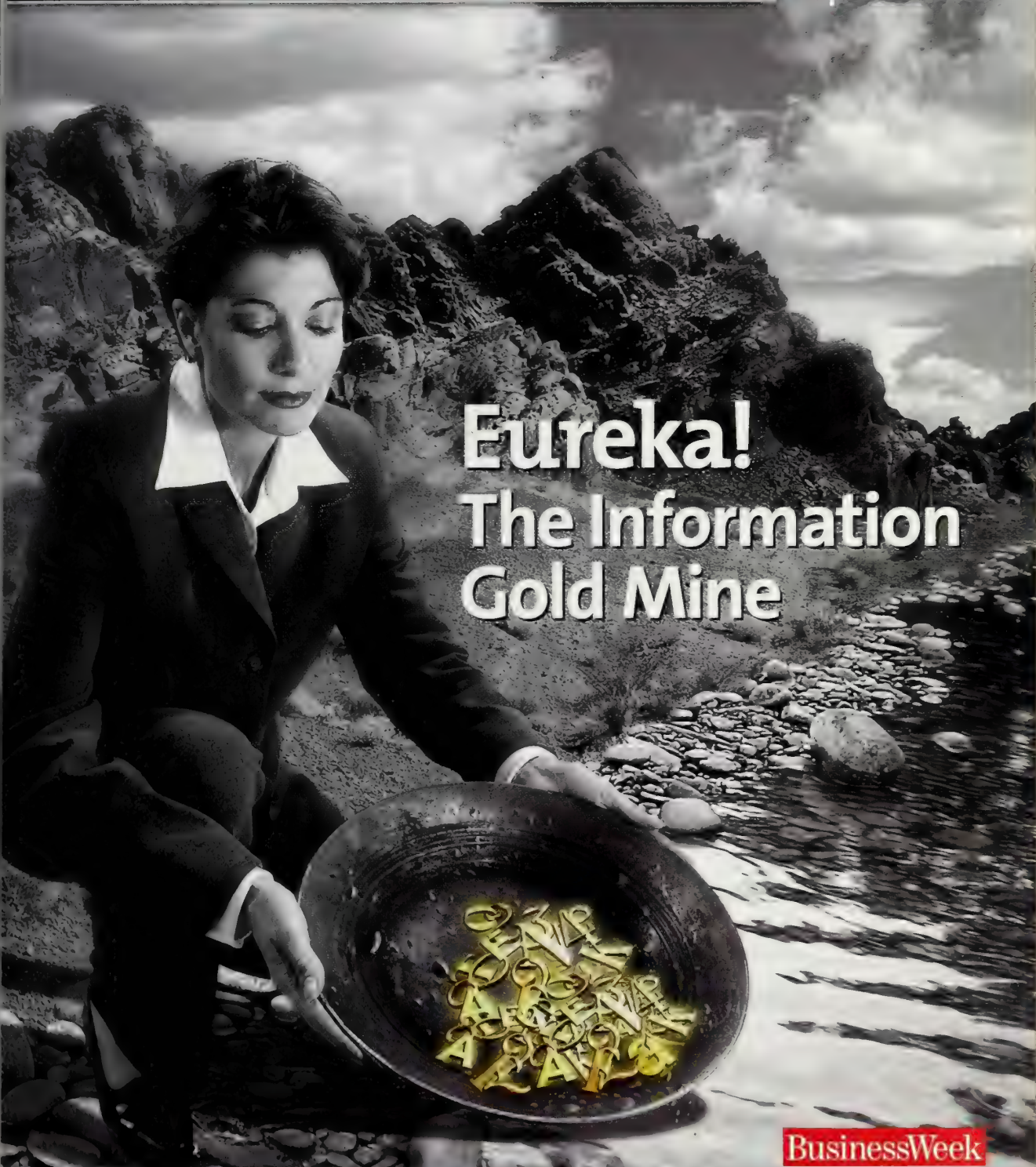
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Achieve Market Leadership:

*Outpace the competition
and your category.*

Optimize Business Processes:

*Reduce operational
costs and improve your
overall efficiency.*

**Create New
Products & Services:**

*Identify new
products and sources
of value to meet
customer demands.*

Reach New Markets:

*Extend your
marketing potential using
new techniques
and delivery channels.*

Enhance Human Capital:

*Empower your employees
by sharing
resources and knowledge.*

Harness Technology:

*Leverage existing
investments and realize the
potential of new ones.*

Manage Risk & Compliance:

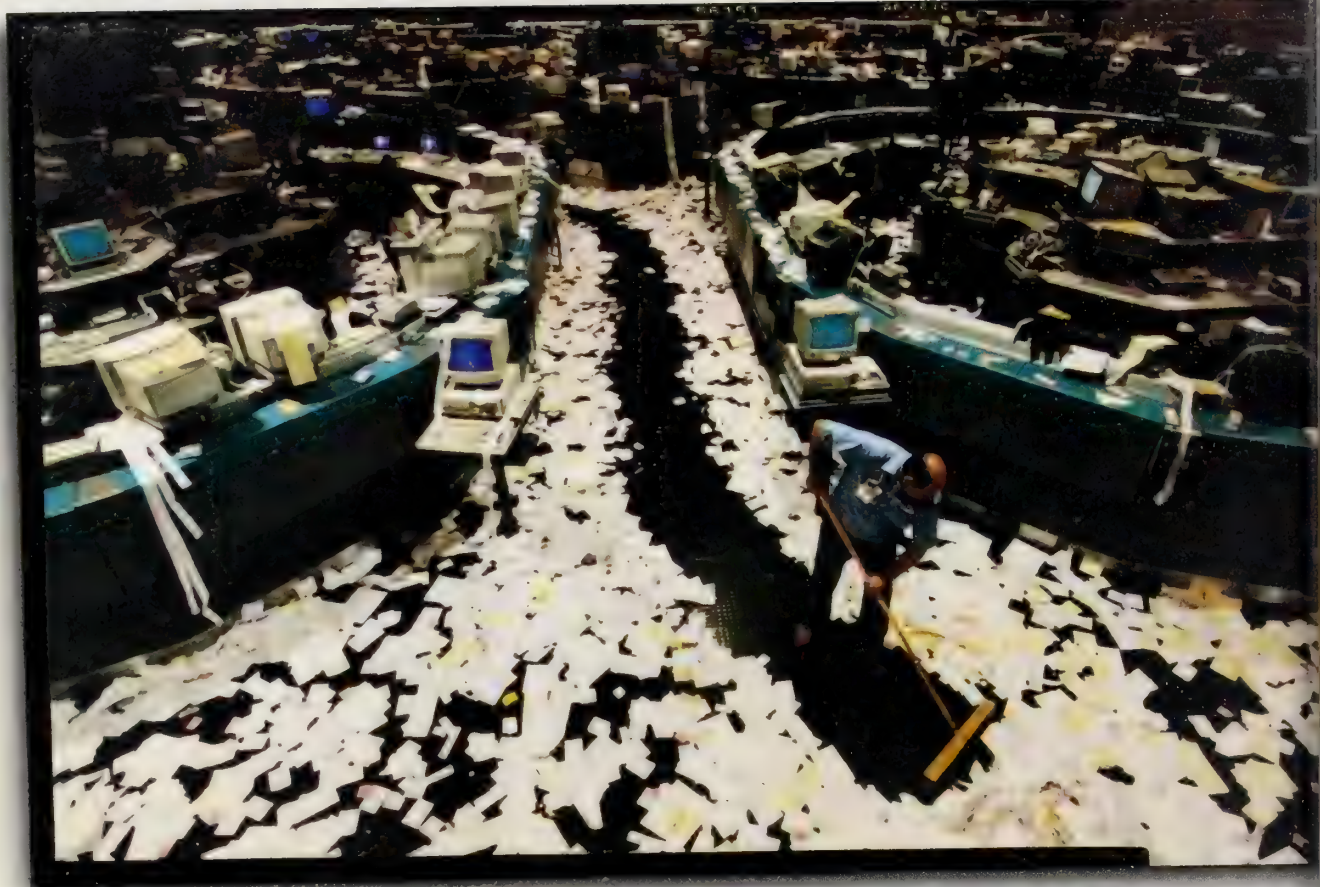
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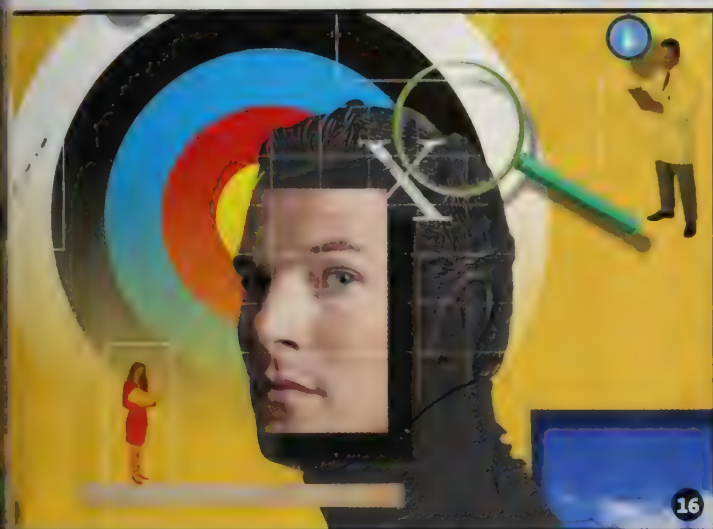


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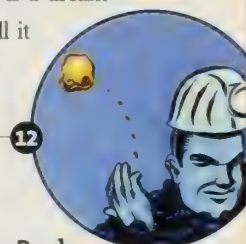




16 COVER STORY

The Information Gold Mine

Whether they're online upstarts or old-school behemoths, companies are scrambling to cull mountains of data on purchasing and window-shopping patterns. It's about getting customers to buy more, reveal more, and to come back later—willing to pay a premium for the tailored products and services that result. This ultrapersonal closeness is a dream come true for companies—but will it be a nightmare for consumers?



Editor's Memo

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The cyber wedding invitation; an auto insurer that follows your every move; asking about Ask Jeeves; truckers with keyboards; finding relief online

PERSPECTIVE

Data Mining: What's In It for Me?

Consumers are being begged to send e-mail to marketers, respond to their surveys, and register at Web sites—but they're not getting much in return

DATA MINE

The Kids on the Net

Soon, youngsters will spend billions online. What are the implications for merchants—and for parents?

STRATEGIES

Opening the Door to Profits

In the heart of Wisconsin, Veyerhaeuser's "dead dog" of a door factory perked up after it fired up an intranet information system

39 PERSONALITIES

Halsey Minor's Major Plans

The CEO sees CNET as a one-stop shop for everything there is to know about tech products and news



44 UPSTARTS

Can You Sell Food Like Books?

Bookstore founder Louis Borders has taken on perhaps the most ambitious venture in E-commerce yet: An online grocery store

52 Invasion of the E-Vikings

Nordic entrepreneurs are rushing to capture Western Europe's Web markets with customized sites that speak the locals' languages

58 NET WORTH

Everyone into the Pool

Venture capital is drawing cash from everywhere—and with returns this amazing, it's no wonder

64 NET CULTURE

Lemonade Stands on Electric Avenue

Anyone can sell anything on the Web—and does. But how much clout do Netrepreneurs have vs. the big boys?

68 CLICKS & MISSES

Taking in the Travel Sites

The top sites for trip planning—Microsoft Expedia, Travelocity, and Preview Travel—are all found wanting

72 CUTTING EDGE

A New Race of Giants?

Instead of being a great democratizer, the Web is in danger of creating a breed of competition-stifling colossuses

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Editor's Memo

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The Road to Webville

In a play, Act I sets the scene and lays out the characters and issues against a broad backdrop. By Act II, it's down to business. And such is the case with BUSINESS WEEK e.biz. This is the second issue of the magazine's new supplement, which explores the sweeping transformation of businesses during these highly volatile times. While the first issue was a special report on one subject—what CEOs need to know to survive—this issue has a traditional magazine format that allows us to handle a slew of pressing subjects. You will find the strategies of Net-smart companies and reviews of Web sites that click—and miss. Find out how virtual companies deliver stuff—say, fresh shrimp—to buyers everywhere. Finally, get new ways to preview what's ahead in our columns: Perspective, Data Mine, and the Cutting Edge.

One thing remains the same in e.biz: our focus. E.biz is aimed at the top brass, the decision-makers who need to manage their way to E-prosperity. For example, our Cover Story, "The Information Gold Mine," reveals how the Web is starting to live up to its promise, allowing companies to analyze torrents of customer data on the fly.

And what better way to spotlight the issues confronting a thoroughly modern manager than by featuring the top execs in the field? Coming in mid-September will be our BUSINESS WEEK e.biz 25, the most prominent people shaping the world of electronic commerce. Look upon it as Act III.

BusinessWeek **ONLINE**

The Web Site for Electronic Business

Keep up with developments in the fast-paced world of E-business at ebiz.businessweek.com. The site offers the latest news from CNET and the staff of BUSINESS WEEK magazine and online. Check out what we'll be analyzing in our upcoming set of regular E-business features.

MONDAY

Perspective: Columnist Geoff Smith previews upcoming advice software from Fidelity's online-brokerage unit (July 16).

TUESDAY

Company Closeup: A look at HyperMedia Inc. (July 20) and a closeup on Previews Travel (July 27).

WEDNESDAY

Movers & Shakers: Profile of Hiroshi Mitani, the founder of online retailer Rakuten and a leader of Japan's emerging "Bit Valley" mecca for Net startups (July 21).

THURSDAY

Street Wise: A weekly commentary on E-business stocks and the markets.

FRIDAY

Clicks & Misses: Web site review of venture capital sites (July 16) and a critique of CNET.com (July 23).

ALSO

Watch for daily additions to our Data Mine, a collection of facts and figures and sample occasional opinion pieces from staffers, researchers, or executives.

Browse through stories from BUSINESS WEEK and BUSINESS WEEK e.biz.

The ebiz.businessweek.com site is a free area, although some stories from the magazine may occasionally be available only to subscribers.

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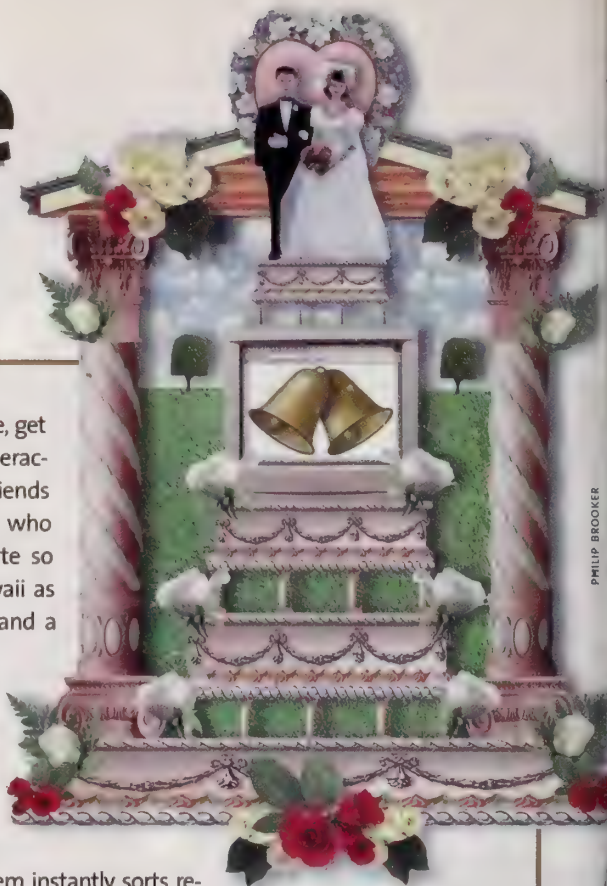
home page

Click here if You're Attending

Weddings are so much work. You gotta order a cake, get a band, and set up your Web-based guest-interaction program...well, in Silicon Valley, anyway. In June, friends of Chris Holten, 30, and Hugh Hempel, 41, sweethearts who met at Netscape Communications Corp., weren't quite so much invited to the couple's October wedding in Hawaii as alerted by E-mail. Holten now has her own PR firm, and a client, Responsys.com, makes software to help companies create online marketing campaigns. She offered to use her nuptials to test the technology. "We will send out 'formal' invitations via 'snail mail' in the coming weeks," her E-missive to friends warned, barely concealing her contempt.

Friends were directed to a Web site for the wedding schedule, activities, and soon, even a guest list. The system instantly sorts responses—so the yesses get added to the future bulletin list, and the noes get sorry-sounding "thanks-anyways." "It's very personal," Holten says. What most impressed the couple: Invitations went out at 11:30 p.m. on June 28. In five minutes, they had three replies.

— Joan O'C. Hamilton



Car 9076B, Where Are You?



Driver's who swear they're little old ladies from Pasadena may get a chance to prove that they drive their buggies only to church. The catch? You have to let your insurance company track your car everywhere you drive it. Progressive Casualty Insurance Co., based in a Cleveland suburb, is trying to live up to its name. It's preparing to test consumers' willingness to swap privacy for discounts. The offering: a global positioning device that transmits occasional reports of where the car is. That way, your premium can be based on the actual risk of where and when you travel. A pilot program is under way in Houston. If successful,

that could mean lower rates. Now, insurers base rates on where customers live and on statistics telling how much they are apt to drive—and where.

Of course, Progressive can keep a very close eye on you. But the company insists the point isn't to monitor policyholders but to justify cheaper rates. All the data is protected by encryption. Besides, if you happen to get lost in the wrong part of town, at least your global positioning device can help get you home.

— Peter Galuszka

Very Good

File this under "What the press doesn't tell you." Before very capitalist Geoffrey Y. Yang made call on BUSINESS WEEK in June, thought it was only polite to up a little bit on him first. decided to use Ask Jeeves the Net search engine. lets Web surfers ask questions instead of using keywords. After all, is on the board of Ask Jeeves Inc., which wants to have an initial public offering on June 30.



As I Was Surfing That Ribbon of Highway

Can the PC replace the CB, good buddy? Officials at PNV.net say: Forget the stereotypes. Of the 1.5 million long-haul truckers in the U.S., 50% have home PCs, and 25% of drivers keep a machine with them. So on July 1, PNV.net (formerly Park 'N View Inc.) launched an Internet service provider, and it plans a portal by this fall. So far, PNV.net has wired 220 truck stops so drivers can plug into a jack next to their rig. The ISP charge: Up to \$15 per month.

The company has high hopes for its portal. PNV.net envisions electronic debit cards so truckers can order merchandise such as books and truck parts online and have it sent to their home or to the next stop on their route. Truckers will be able to

E-mail friends and family. They will find a digital log book on the site to track mileage and a listing of loads to haul.

PNV.net isn't the portal equivalent of a honking 18-wheeler, but it should grab a few of America Online Inc.'s customers. Troy Snyder, a 29-year-old trucker from Robinson, Ill., has switched, slashing his bill from \$32 a month with AOL to \$10. With the service, Snyder can keep track of weather conditions and friends. So who needs a CB radio?

— Ira Sager



Where to Find Relief Online



It's part of a side-splitting campaign taking aim at your worst drugstore nightmares. Ad agency McCann-Erickson Worldwide has crafted the spots for Seattle upstart drugstore.com Inc., which filed for a public offering in May and is at the forefront of the Internet's latest attack on brick-and-mortar retailers.

There's just one problem: Even with a \$17.95 overnight-shipping charge, you have to wait one day for your remedy. The company insists the ad stresses the discomfort of seeking information in a store, not the countdown to relief. But at that rate, "the general" could very well surrender his privacy for some more immediate relief.

— Joan O'C. Hamilton

A TV spot features a jumpy guy standing in a drugstore aisle. A ninny clerk just can't understand the poor guy's pleas that he needs help because the "general is having trouble deploying the troops." The message: Tap in "relief" at www.drugstore.com, and your discomfort will soon be over.

I'll Find Out at Once

What happens when you Ask Jeeves? "Who is Geoff Yang?" The answer: "I think you may have asked something." We didn't. The link that suggests that we're up, and Jeeves then ventures: "Did you mean: 'Who is Geoff Yang?'" We didn't, really. Yang admits Jeeves is weak at recognizing proper names, but he says that "names are in the works." "I'll ask you to put in a few sentences about your hobbies and board members," he says. Good news: Ask Jeeves has

backup systems that get you to the right stuff. In addition to its distinctive method of answering questions with questions in order to zero-in on what users want, it taps search engines such as AltaVista and Infoseek, which let Ask Jeeves turn up profiles on Yang. Of course, Ask Jeeves (courtesy of WebCrawler) also headlined the Official Geoff Billington Fan Club as celebrating "an international show jumper and his many horses." Now that's a group that makes a whole different kind of hay from venture capitalists. — Timothy J. Mullaney

THE EIGHT-SECOND RULE



Tired of poky Web action? Zona Research says surfers may bail out if the information they request doesn't pop up within eight seconds. With the majority of modems at 56kb level, violating the eight-second rule inflicts more losses than slow modems. All told, slow downloads could clip as much as \$4.35 billion from U.S. E-commerce sales each year. Ouch!

The Monthly Loss From Sluggish Web Downloads...

SPEED	LOST SALES MILLIONS
14.4kb	\$73
28.8kb	\$97
56kb	\$100
ISDN	\$14
T1	\$38

...Means Big Annual Losses For Lots of Industries

INDUSTRY	LOST SALES MILLIONS
SECURITIES TRADING	\$40
TRAVEL & TOURISM	\$34
PUBLISHING	\$14
GROCERIES	\$9
PERSONAL FINANCE	\$5
MUSIC	\$4
BOX OFFICE RECEIPTS	\$3
TEXTILES/APPEAREL	\$3

DATA: ZONA RESEARCH INC.



Mining Info What's in It for Me?

Despite the hype, there's not much pay dirt for the consumer

If all my data are being mined, why am I not getting what I want? One of the great frustrations of being an online shopper is hearing all the fuss about data mining and how making Internet retailers so much more savvy than their brick-and-mortar counterparts. That's frustrating, because most of the benefits are going to the Web upstarts, not to the consumer. Although the promise of customized products and services is dangled before us

cyberspace, it has, so far, been the exception rather than the rule.

Online consumers, being asked to register, E-mail, and respond to surveys in record numbers, might wonder where all this great revelatory knowledge is going. If I'm really to believe that online merchants are going to outsell my old favorite stores thanks to the data they've mined from me, they'll have to do better than Amazon.com Inc.'s much-praised practice of book suggestions based on my past purchases.

Truth is, at this point in the development of the Information Economy, data mining is still a tactic used primarily to cut costs, not satisfy consumers. That shows in the kinds of marketing that online retailers now proffer. I've shopped at NetGrocer Inc., baring my shopping list to the Web merchants. Back in their data banks, they now have me clearly pegged as a buyer of everything from Alpha-Bits to Mott's apple juice boxes and a wide array of short-cut products from soup mixes to instant cereal. What can we extrapolate from all this information? How about that I'm willing to shell out a few extra bucks for a saved minute or two. But the marketing communications I've received from NetGrocer are concerned mostly with delivery discounts. My data scream: willing sucker for high-margin convenience product. Instead, I get a couple of dollars off on shipping.

SUGGESTIONS, PLEASE. NetGrocer may shave some bucks off its marketing budget by targeting me, rather than distributing that delivery discount far and wide. But the benefit to the company is not much of a gift to the shopper. It's certainly not enough to keep me from trying their competition. Now, if NetGrocer were to come back from using my information with suggestions of other time-saving products, a shopping list/menu planning program, or some other offer that simplified my shopping life, I'd know they truly know me. And I would be hooked.

Admittedly, that's a lot to ask from any

retailer, traditional or virtual. E-tailers are only now coming against a problem that has plagued the traditional business community for years. Data mining has been around a long time, but many retailers of all kinds still aren't very good at it. Data seems, are a lot easier to gather than they are to use.

"EPIPHANY." In fact, one of the biggest examples of failed data mining comes from the earthbound world of retailing: the death of Sears, Roebuck & Co. catalog. Here was a beloved institution of American consumerism. As it teetered on the brink of extinction in the early 1990s, many Wall Street analysts told me the catalog would survive, thanks to its extraordinary database of American consumer behavior. But data are useless if you can't make them work for you. "We think: 'If we just get more and more data, at some point we will have this epiphany and know what to do,'" says Leonard Fuld, president of Fuld & Co., a Cambridge (Mass.) consulting firm. "But in many cases, companies just get frozen. They can't make sense of it all." The Sears catalog, a potential data mine, died.

Still, the fact that data-directed marketing is hard does not mean online shops off the hook with consumers. Better knowledge of

consumer and improved customer service are part of what the online community promises when it beckons to us to go virtual. In the lightning-fast development of the E-commerce community, the novelty of being online and open 24/7 is wearing off. Consumers are now taking a hard, cold look at the two worlds of shopping and making decisions about which merchants serve them best. Internet companies boast of their ability to be smarter, better, and faster—thanks to all the data they're collecting. And investors may be lured by the cost-savings that data mining is producing. But don't keep us shoppers waiting too long. Those brick-and-mortar stores haven't closed yet. ●



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network, we provide  the
connections to make sure all
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always deliver. Streaming media.
Voice-over IP.  Distance
medicine and learning. Gaming.
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Forget the Mall. Kids Shop the Net

Soon they'll spend billions online. How should marketers and parents respond

Ever wonder what your kid is doing online? Consider how Jason Smikle, 13, spent past few nights on the Internet. He sampled the CD soundtrack for the Eddie Murphy movie, *Life*, ogled Nike's new \$165 Air Jordan XIII Lows, and browsed through assortment of \$1,300 PCs from the likes of Dell and Gateway. "I did everything you do except buy," Jason says. Later, he did buy the CD at a local store.

Kids are going Net-crazy. Nearly 50% of teenagers are online and, of those, information gleaned from the Net has an impact on how 68% of them make purchases, according to Greenwich (Conn.) researcher NFO Interactive. Nearly 18% have bought something at cybershops, and a further 50% of online teens have used the Internet to shop for items before rushing to purchase them at brick-and-mortar stores. And young people won't outgrow Net shopping they way they did their last pair of Gap jeans, either. Kids from 5 to 18 will spend an estimated \$1.3 billion online in 2002, up from an expected \$1.9 million this year.

The Internet, remember, is this generation's rock 'n' roll, and E-commerce gives this already compelling medium even more, shall we say, twist and shout. Teenagers pumped \$150 billion into the U. S. economy last year. The potential to transfer some of that to the Web has online merchants drooling. There's a "frenzy over teens," says Dan Pelson, chief executive of Bolt Media Inc., a Web community for teenagers.

Web sites eager to cash in on the purchasing power of teens are quickly revamping their tactics. Bolt, where teens can chat about everything from the coolest shoes to the hottest sports teams, has scrapped its mostly Bolt-brand shopping mart in favor of purchasing options integrated into every area of its site. Visitors to Bolt's sports zone will learn about sales on mountain bikes. Clothes hounds will get sneak peeks of hot fashions in the style zone. And members are notified by E-mail of sales tailored to their specific tastes.

KIDDIE PLASTIC. Or check out CDNow, the popular music site where 28% of the visitors are 13 to 19. This fall the company will allow tune-hungry teens to download music from more than 10,000 bands on its network of Web sites. Advertisers will be able to buy banner ads on the sites, and CDNow will stuff its CDs with advertisers' coupons and fliers.

Not having credit cards used to keep kids from shopping online,

but that's changing. Issuers mailed out 3.2 billion card solicitations last year, and now an estimated 7 out of 10 college students own their own vinyl. What's more, several Web vendors, including Visa, plan to issue Web-only debit cards that let teens buy items off site. They'll work like this: Kids deposit money into an account, then show the account number at a site to make purchases. "It is going to make getting a driver's license and a checking account a distant second and third to the new most important thing in life," says Jason's father, Ken Smikle.

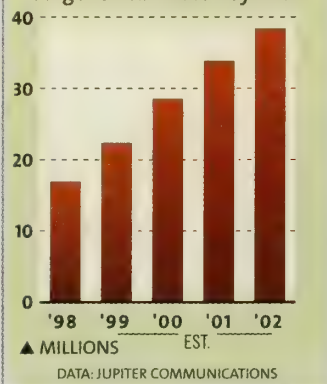
Young people's urge to splurge, however, heightens concern about an Internet that many parents see as a vast world fraught with danger. As kids spend more time online—nearly seven hours a week—they increasingly are only a click away from gambling, pornography, and online advertising. The potential for worrisome activity became clear in April, when Andrew Tyler, 13, placed \$3.1 million worth of fictitious bids on merchandise advertised on Web auction site eBay. The site didn't require Tyler to supply a credit card, so his parents never cost him any money. "My fear is that kids will get hold of their parents' credit cards and all they have to do is type in a number and shop forever," says Susan E. Rossano, a Jersey elementary school teacher whose 14-year-old shops on the Web.

How do Web merchants balance teens' interest in Web shopping with parents' concerns? Several sites—DoughNET, RocketCash, iCanBuy—feature "digital wallets" that store a specified amount of money that's connected to a parent's account. This way, kids don't rack up debts

they can spend whatever money they have. Other sites, including DoughNET, let parents specify where their kids are allowed to spend money. "The parent-control system is a way to ease children into an adult world," says DoughNET CEO Ginger D. Thornton. Web merchants had better hurry up. Jason Smikle and other kids are already there. ●

KIDS FLOCK ONLINE

The number of kids between 2 and 18 on the Net will surge to 38.5 million by 2002



Name: Will Singleton

Profile: Purchasing manager/top 100 customer

Customer history: Ordered 5,000 laptops, told joke about Java: 5/09
Bought service contract, told joke about Java: 5/10
Changed order to 10,000, told joke about Java: 5/11

Things to remember: Politely laugh along.



You know the type. The tragically unfunny comedian. Just remember to be kind, because he's also your customer. That's where Clarify® comes in. Our solutions help you identify and remember the things about customers that will make their experiences more enjoyable. By sharing these details across every customer interaction, from sales and support to call centers and the Web, you create a customer-focused front office. And not coincidentally, some incredibly loyal customers. Since 1990, we've helped companies like Best Buy, Ericsson, First USA, and GE strengthen their customer relationships by making those relationships more personal. To find out how we've helped someone like you, just call 1-888-CLARIFY or go to www.clarify.com.



All you need to know.



HER GREEN

The Information Gold Mine

New software—and the Net's legions of cybersurfers and shoppers—are starting to hand companies opportunities they've only dreamed of

When Harley Dixon clicked on NextCard Inc.'s advertisement for a credit card on the Quicken.com financial Web site, he couldn't believe what he found. It promised instant approval and a choice of terms based on his credit history—all in less than 35 seconds. Intrigued, the retired engineer from Henrietta, N. Y., filled out a short online form with his name, address, income, and Social Security number. Bingo! Seconds later, up popped three offers. Says Dixon: "Next thing you know, I had a new card."

Behind the scenes, the snap approval was a technological tour de force for NextCard. Instantly, NextCard's computers dialed the three major credit bureaus to check Dixon's record. Analyzing that along with his current balances, NextCard in a split second zipped through 30,000 potential combinations of terms in its portfolio and chose three offers tailored precisely to Dixon's profile. The result: Instead of the usual three to six weeks to issue a

card and transfer balances, NextCard won a new customer in a heartbeat. "The Internet is the most fantastic source of data the world has ever seen," says NextCard Chief Executive and founder Jeremy R. Lent. "We're creating a brand-new science."

All over the Web, a data gold rush is on. The incredible communications and computing power of the Internet is handing companies an unprecedented opportunity to collect and analyze information. By tracking everything from which advertisements prompt that first mouse click all the way through to the actual sale, they're scrambling to unlock patterns of customer be-

COVER STORY

havior hidden since the dawn of commerce.

Of course, companies have always tried to quantify customers' wants and needs—and largely failed. Department-store pioneer John Wanamaker famously complained 130 years ago that half his advertising was wasted—he just didn't know which half. Since then, companies such as Wal-Mart Stores Inc. have set up huge virtual warehouses full of product and customer data. But those data have been cumbersome to get at and daunting to analyze. Figuring out what customers really want has remained more of a black art than a science.

LESS WASTE. Now, companies are starting to harness the Net's power to not only answer Wanamaker's question but go far beyond that. They are working away, mining the hidden veins of gold in mountains of data in an effort to prompt customers to buy more, stick around, and, down the road, maybe even pay extra for the tailored products and services that will result. Along the way, the goal is to save money by targeting only the most profitable customers and avoiding the manufacture of costly

products nobody really wants. Ultimately, merchants want to tailor unique products and services to each and every customer—so-called mass customization, the unrealized dream of every marketer.

Information gathered over the Net can provide the kind of insight into customers that Wanamaker could scarcely imagine. It's as if he could train cameras on every

revolutionize the business world. Now Web sellers have all this traffic and millions of customers, they need to find a way to extract the real profits that investors are increasingly demanding. If they can provide a unique service or product, they can charge more and even charge more. "We want to get to know them the same way a small-town shopkeeper of yesteryear might

Yahoo! collects 400 billion bytes of info every day—the equivalent of a library of 800,000 books

square inch of a store, with teams in back rooms monitoring how often shoppers touch a rack of sweaters or turn up their nose at a pair of slacks—and still more legions to make new products on the spot and rush them out to those fussy buyers. Says Chris Halligan, director of Dell Computer Corp.'s E-commerce business: "The Internet has turbocharged our ability to understand our customers."

This ultrapersonal targeting may help E-commerce finally deliver on its promise to

gotten to know them," says Amazon.com Inc. CEO Jeffrey P. Bezos. "That kind of personalization is going to be extremely valuable for the customer."

That's why companies are furiously collecting and analyzing the bits and bytes spinning around their computers' fast-growing arrays of disk drives. Already, for instance, the Web portal Yahoo! Inc. collects some 400 billion bytes of information every day—the equivalent of a library crammed with 800,000 books—about where visitors

WHAT YOU NEED IN YOUR TOOLBOX FOR MINING DATA

MANAGING CUSTOMER CONTACTS

COMPANIES THAT MAKE IT POSSIBLE: Siebel, Pivotal, Silknet, Vantive

Software programs pull together a wide swath of information on customers based on how they interact with a company—through sales calls, meetings, online and phone inquiries, or buying products and services. Government Computer Sales, for example, combines online sales with traditional sales to keep track of their best customers and what they are buying—helping increase the number of products sold.



CUSTOMER SERVICE

COMPANIES THAT MAKE IT POSSIBLE: Brightware, Chordiant, NewChannel, HNC

This software lets E-merchants and content sites automatically reply, route, or segment E-mails so companies can be more efficient and effective in responding to customers. Some also pull together info from call centers. It's used by the likes of Suretrade, Schwab, and Ticketmaster Online-CitySearch to automate replies to customer E-mail and forward E-mails to specialized customer-service reps.

AD TARGETING

COMPANIES THAT MAKE IT POSSIBLE: AdKnowledge, DoubleClick, 24/7, Flycast, Matchlogic, Engage

These services dish up and track ads across a network of sites, monitoring who is clicking on the ads, how often, and whether the ads actually lead to sales. The services often build up profiles that can include information on demographics, tastes, or E-mail addresses of millions of people to improve targeting. Advertisers, including Travelocity, General Motors, and P&G, find these services to be just the ticket.



on the site. It hopes to figure out which products will most appeal to customers so it can charge higher rates and drive more E-commerce sales. Likewise, marketing service Engage Technologies has gathered some 30 million of its unique customer profiles.

The shock waves from this new approach will shake not only cyberspace but brick-and-mortar merchants. Already, retail stalwarts such as Consolidated Freightways, investment adviser PIMCO, and industrial parts distributor W. W. Grainger are beginning to tap online customer information. "It's at the forefront of what we're growing E-commerce," says Grainger Internet Marketing Vice-President Robert Root. His customers are largely employees dispatched to make purchases for their companies. Armed with data on the buying caps of each of these employees, Grainger targets them with E-mails about products within their price ranges.

What remains to be seen is whether merchants will raise a ruckus about all this intimate knowledge of their secret desires.

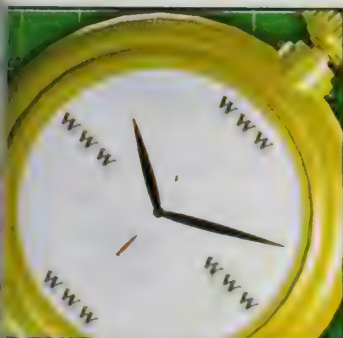
Although customer data always have been collected, it has never been this easy to connect information within and across networks and to use that data instantly. That's what worries privacy advocates. On June 14, they cried foul when DoubleClick Inc., which runs and tracks ads on 1,500 Web sites, announced that it would buy Abacus Direct Corp., which has purchase information on 88 million households. Their worry: The combined data could reveal so much about buyers that it would violate their privacy. "Privacy will grow as a public-relations and political issue," predicts Martha Rogers, a partner at marketing consultant Peppers and Rogers Group (page EB 30).

"CONNECT THE DOTS." That's not the only obstacle to merchants' mass-customization dreams. Many companies admit they've only just begun to look at the technology they need to most effectively use the reams of information they're collecting. According to a Deloitte & Touche study of 867 manufacturing companies in 35 countries, less than a quarter of those surveyed now use data-mining technologies. Says Deloitte & Touche

partner David Branner: "There is a tremendous amount of work to be done to develop an Internet strategy to connect the dots with customers."

The challenge is particularly acute abroad, where E-commerce hasn't taken hold as fast as in the U. S. Many companies in Japan haven't even digitized much of their marketing and sales data, says Joichi Ito, chairman of U. S. portal Infoseek Corp.'s Japanese unit. Some overseas companies, however, are tiptoeing into mining their data. Matsushita Electric Industrial, the world's largest consumer-electronics company, conducted an online poll of the 8,000 subscribers to its Internet access service about the gifts they had bought or planned to buy online. Now, Matsushita is sharing those results with its clients, such as department stores and mail-order businesses.

What's the magic behind all this newfound data collection? While marketers can't track how much junk mail shoppers throw out, any online merchant with tracking software and database programs can keep tabs on how many times a Web visitor



MAIL DIRECT MARKETING

COMPANIES THAT MAKE IT POSSIBLE: sponsys.com, Annuncio, Digital pact, Post Communications

The turnaround cycle on these services is what sets them apart. Using lists of e-mail addresses, the services and software can get responses from customers in hours rather than the days and weeks typical with snailmail direct marketing. Companies, such as Protons, PreviewTravel, and Tower Communications, target product offers based on customers' interests or what they've bought in the past.

DATA ANALYSIS ENGINES

COMPANIES THAT MAKE IT POSSIBLE: E.piphany, Manna, MicroStrategy, Blue Martini

Designed to pull together and analyze information from systems that companies already have in place, including inventory, logistics, and sales databases. Used by Schwab, Streamline, and Capital BlueCross to track trends within segments of customers so they can decide what kind of products and services to offer.



SUPPLY CHAIN AND LOGISTICS

COMPANIES THAT MAKE IT POSSIBLE: Manugistics, i2, Nonstop Solutions, VIT

The last—and, at this point, the weakest—chain in the loop, the goal is to translate an understanding of customers' tastes and purchases into a quick turnaround in making products and working with suppliers. Dell and Cisco are on the cutting edge, though a wide variety of others, including Nestle, Compaq, and Ford, are heading in this direction.

checks out an advertisement or a product—and what they skip over. To do that, Web sites can simply place tags, called cookies, on a visitor's computer disk drive. Those cookies, combined with online registrations, can then be added to information from E-mails and phone inquiries placed by customers. Add in what the cookies and credit cards say about purchases made, and E-businesses suddenly have a treasure trove of insights.

Still, it's only in the past year that companies have used the technology to its fullest. Once the Net reached mass market status, with 100 million cybersurfers and counting, Web site operators began demanding software that would assess what was clicking and what was missing. Now, there is a slew of software to answer their questions—from Responsys.com's \$5,000-plus programs that monitor customer orders and tastes so it can create tailored E-mails to E.piphany's \$250,000 software modules that track buying trends across hundreds of Web sites, as well as phone calls from customers and in-store behavior.

Many companies already are reaping big benefits from their efforts at using these gobs of data. In a recent survey by Forrester Research Inc., 16% of large companies already expect more effective use of customer information to help them cut costs this year. An additional 34% are banking on savings by 2001.

Just getting info to the right people inside the company is paying dividends for some. "The pressing issue in Corporate America is: 'How do I identify the best customer?'" says Roger Siboni, president and CEO of E.piphany, a Palo Alto (Calif.) software startup that helps companies analyze their customer information (right).

FATTER MARGINS. That has been a big motivator for Government Computer Sales Inc., a \$100 million hardware- and software-procurement service in Issaquah, Wash. The company has created profiles of its customers—3,400 government departments

Suddenly, the seemingly impossible dream of "mass customization" is within reach

in six states—based on online and traditional sales, marketing and accounting databases, phone inquiries, and other sources. The profiles help GCSI, which does about 60% of its interactions online, track and target the customers that buy the most. That

has helped the company persuade its clients, on average, to nearly double the number of software programs and computer products they buy—boosting GCSI's profit margins from 7% in 1997 to 11% in 1998.

Indeed, harnessing the right information offers companies not just a way to

save money but also to make more of it. Two months ago, Consolidated Freightways, a \$2.1 billion trucking company, found a way to cater to small businesses. When visitors to its Web site look at certain rate quotes or routing guides, a window auto-

E.piphany may just live up to its hifalutin name. The Palo Alto (Calif.) software maker has created programs that let data-hungry companies scarf up and analyze almost any scrap of information on their customers. That has attracted likes of Charles Schwab, Capital BlueCross, and Hewlett-Packard. With E.piphany's \$250,000 software, these companies can suddenly do what has bedeviled marketers for years: ferret out customer behavior to offer just what buyers may be looking for—on the fly. "E.piphany is the railroad track that brings all the information the companies need," says Roger Siboni, E.piphany's president and CEO, who left KPMG International to join the startup. Here's how it works: The software, dubbed E.piphany e.4, pulls together E-mails from customers, questions at call centers, purchases on a company's Web site, even how a potential buyer responds to sales calls and online advertising.

Businesses use that data to uncover trends and spot the best customers. For example, software maker Visio Corp. was surprised to find that consultants were responsible for 30% of the online sales of one of their software packages for diagramming and drawing. Seattle-based Visio now plans to tailor services and marketing for the consultant crowd. "What's key is that we're able to learn about our customers in real time," says Michael Molendijk, Visio's director of marketing for its online site. With such testimonials, E.piphany may be helping customers see the light.



matically pops up offering online help. While customers get a speedy helping hand, Consolidated collects info from them—uses that to target them for more business. The benefit: These small businesses bring in much higher profit margins—10%, versus the typical 3% for large customers.

Consolidated isn't alone. Forrester forecasts that 20% of large companies expect to use customer information taken from the Net to boost revenues this year, with 74% expect a lift by 2001. PIMCO Fund is one of those that's seeing results. The investment-advisory firm offers an Internet service that uses each investor's profile as a storehouse of 700,000 records on financial funds to tailor a proposed investment portfolio.

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within two minutes. About 30 daily ads that average \$250,000 are now generated from the system. PIMCO estimates that if half the proposals are accepted, it will add 75% more business than it has gotten in the past.

The new ability to track results can mean quick payoffs. Online educational retailer Kids.com Inc. used AdKnowledge, a Palo Alto (Calif.) company that tracks ad placements, to track every in- and out-of-transaction that resulted from a \$1 million online campaign last December and January. It soon found that a few sites such as Microsoft Network, Yahoo!, and FamilyEducation Network—attracted

the most clicks on its ads, so the company stepped up spending on those sites. Result: Half its customers are people who bought after viewing the online ads.

It's also a way to quickly correct marketing nightmares. Gleaning trends from its computer-review guide, technology news site CNET Inc. could show one advertiser—say, a computer merchant—that its offerings bombed with most buyers, and even those that buyers wanted cost too much. "The value of marketing on the Internet isn't in the clickthroughs," says CNET Chief Executive Halsey Minor about the number of times people click on an online ad. "It's in the data you capture."

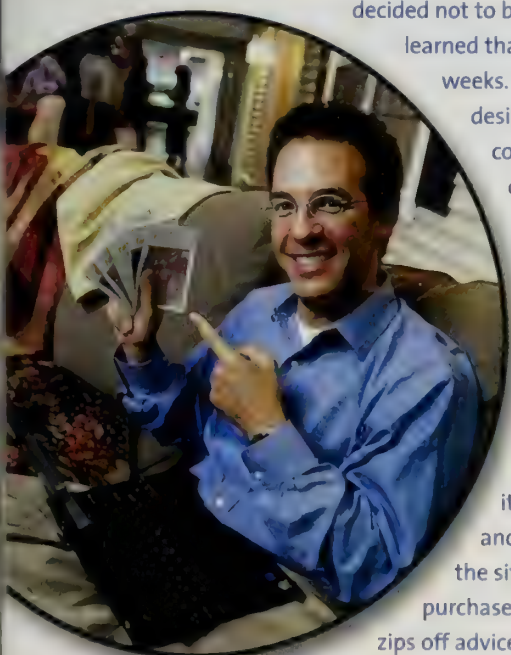
Andrew Brooks, president and CEO of Furniture.com Inc., wants his customers to feel pampered—as if they'd just nestled onto one of the plum-colored velvet slipcovers he's selling. That's why two-year-old Furniture.com overhauled its service in January, adding software and computing power so the company can collect more telling information on its customers. Brooks is betting this will lead to products and personalized services that convince his clientele to snap up everything from Shaker tables to Frank Lloyd Wright lamps.

It has been a pretty good bet. For starters, after analyzing Web surfers' behavior on his site, Brooks found that a high number of visitors were interested in sofas costing \$700 to \$1,100. The problem was, they decided not to buy when they clicked over and

learned that delivery would take up to 12 weeks. So the company persuaded a designer to come up with new couches, available in July, that can be delivered within three weeks of an order.

Staying attuned to customers hasn't stopped there. The Framingham (Mass.) startup now offers a service called My Selections, which lets cyber window-shoppers pick out different items—say, a bedroom suite—and then store those choices on the site so they can mull over the purchase. That's when Furniture.com zips off advice and additional information

that might persuade them to buy. "We're extremely close to our customer because every single day, we know what they shopped for, what they liked, and what they didn't like," says the 36-year-old Brooks. Since January, the site's conversion rate of visitors into buyers has more than doubled. That has to feel nearly as good as those velvet slipcovers.



That data also can help companies comb their information stashes for clues on how to keep their customers coming back. When BabyCenter Inc., an online baby content- and-products site, opened its cyberstore for business eight months ago, about 100,000 people signed up for bimonthly newsletters about promotions and new items. But results were underwhelming: Only 6% clicked on the links, far below the 10%-plus typical of BabyCenter's other informational newsletters.

FIXING HOLES. So in May, after analyzing what customers clicked on in the newsletter, BabyCenter revamped it around themes such as "Summer Days with Your Baby," with sections targeted at different baby age groups. Since then, the click-throughs have jumped to 25%, with 1% to 2% of those people buying. Says Duncan Dreschel, BabyCenter's director of marketing: "If you can be smart about your product and are relevant, that's when you can develop loyalty."

One of the best ways to keep those

THE CUSTOMER-DATA MOTHERLODE

How companies plan to use the information they have assembled on their customers

	1999	2001
MARKETING	18%	52%
CUSTOMER SERVICE	16%	48%
SALES	16%	34%
PROCESS IMPROVEMENT	2%	22%
FRAUD DETECTION	10%	14%
PRODUCT DEVELOPMENT	4%	10%
DON'T USE DATA	72%	0%
DON'T KNOW	0%	18%

How companies expect they will benefit from their wealth of customer information

	1999	2001
INCREASE REVENUE	20%	74%
CUT EXPENSES	16%	34%
NO IMPACT	72%	0%
DON'T KNOW	0%	20%

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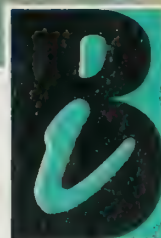
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customers is to provide better service. On-line upstart Furniture.com Inc., which offers 50,000 products, from couches to Persian rugs, is testing that theory. When customers have questions or want advice, they can hit the Design Consultant icon on the site. Design reps then use product info along with customer feedback and purchasing behavior to make targeted suggestions. This data-intensive approach has helped Furniture.com's revenues jump fourfold, to about \$1 million in May. "As customers share specific information about their wants and needs, we can be much more responsive," says Furniture.com CEO Andrew Brooks (page EB 23).

TIGHT COOPERATION. Ultimately, merchants both virtual and physical hope to reach the Holy Grail of manufacturers and service providers: products customized for every single customer. The vast information the Web provides on each buyer has suddenly put the seemingly impossible dream of mass customization within reach. But it requires slick cooperation among suppliers, manufacturers, distributors, and retailers. Dell has led the way with its built-to-order PCs, but it's a whole new approach for most industries—even online merchants. "Our store will be completely re-decorated for each and every customer," vows Amazon.com's Bezos—but he says that could take up to 10 years.

That's why, for now, mass customization is happening only in bits and pieces—but intriguing bits and pieces, nonetheless. With Yahoo!'s My Yahoo service, for instance, registered users can set up a home page with their own stock portfolio and news sources—prompting them to spend up to five times longer on the site than other Yahoo! visitors. And Yahoo! can use the registrations to target ads to their interests. Then there's Harley Dixon's personalized credit card. He not only got customized terms, but NextCard let him upload through the Web and stamp on his

card a photo of an airplane he's building. For Dixon, the customization helped cinch his decision to apply. And for NextCard? Customers who have personalized cards are more than twice as likely to use their cards as people who don't have them, says NextCard's Lent.

Nifty enough, but other companies are digging even deeper into their information

offer up tailored products—on the Web. For instance, if a customer is looking for a mortgage or college loans on the Web, KeyCorp will target offers tailored to the customer's financial situation.

Despite the Net's promise, bringing all of this data together and making sense of it remains a huge technological and logistical challenge. In a Forrester Res

How do you harness the hurricane of information on the Net and elsewhere to get ahead of your rivals? Ask the gurus. Others sure are.

From separate offices in Stamford, Conn., and Bowling Green, Ohio, Don Peppers and Martha Rogers are shepherding Net upstarts, as well as traditional companies, into a brave new world of E-commerce. They've written a series of hot-selling books—*The One to One Future*, *Enterprise One to One*, and this year's *One to One Fieldbook*—with a simple message: The big winners will be those companies, like American Airlines Inc. and Dell Computer Corp., that best use the data they collect on constantly shifting customer tastes. "It's a learning relationship that involves interacting with the customer, customizing, and then doing it all over again," says

Peppers. That message is striking a chord:

The pair do more than 400 annual seminar workshops, and speaking engagements in places as far-flung as Turkey.

Peppers and Rogers pinpoint two key advantages to cozying up to customers. First, by tailoring products and services to a buyer's every fancy, clients will become loyal, shunning the competition. Even better, as customers tell the company more about themselves, sellers can create new products that have built-in buyers. "It's not just using the information I know about a customer to figure out better-targeted harassment," says Rogers. "It's about figuring out what this customer needs next from us, when, in what form, at what price, and how."

Now that's not just getting ahead of rivals, but customers, too.



ONLINE LINK

A Q & A with consultants Martha Rogers and Don Peppers is available online at ebiz.businessweek.com.

gold mines. This fall, financial-services company KeyCorp plans to begin offering customized products and services to consumers as they move around its Web site—all based on a data trove of the 7 million customers who frequent KeyCorp's branch offices. When any of those customers visit KeyCorp's Web site, it combines the older data with the new information on their Web movements to

survey in May of 54 online retail companies, 39% said that combining data from different systems has proven to be difficult. "There is a lot of promise in data management," says Richard Rock, director of consumer insights and analysis for online auction house eBay Inc. "But most companies are drowning in data, and that's the biggest obstacle."

What's more, companies will have



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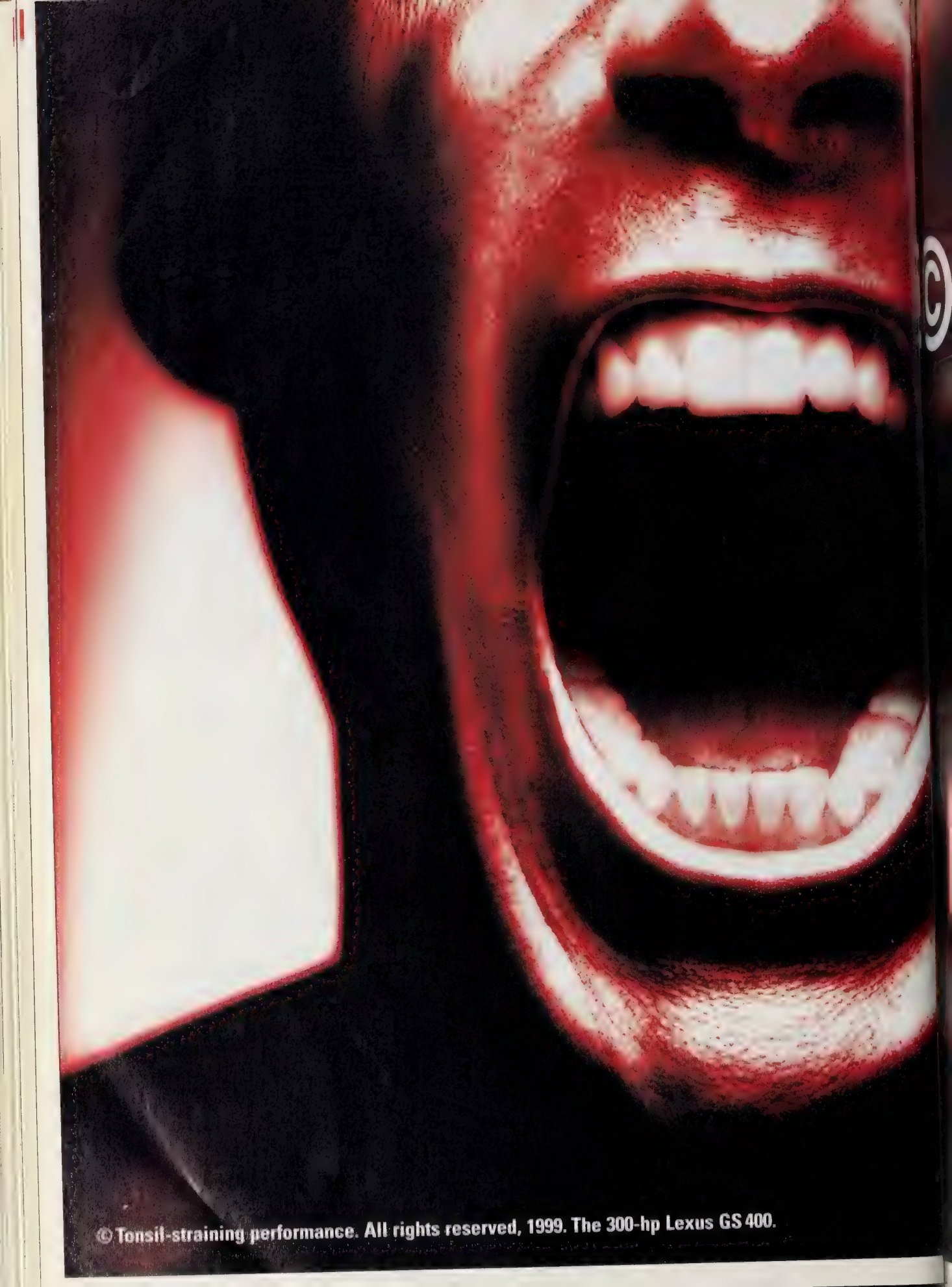
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address privacy concerns more directly or face a consumer backlash. Already, those concerns have prompted calls for tighter government regulation. If that goes too far, companies may be hamstrung in what data they can acquire and how they can use it. "These are goldfields, but there are also some bears and people out there with shot-

guns," says Jason Catlett, a privacy advocate and consultant on writing privacy policies.

If they can overcome those concerns, says, marketing consultant Don Peppers, companies may finally provide the kind of frictionless commerce that both they and consumers have always sought. The ideal, he says: "You already know what I want—I

don't even have to tell you." For better or worse, customers may soon find that one—not even Mom, hubby, or their faithful dog Spot—knows them better than a friendly merchant in cyberspace.

—Contributing: Linda Himmelstein
Robert D. Hof in San Mateo, Calif.,
Irene M. Kunii in Tokyo

COMMENTARY

Protecting E-Privacy: Washington Must Step In

BY MARCIA STEPANEK

George Orwell's vision of Big Brother was government run amok. But it's not government that threatens privacy today. It's Internet commerce.

As the Web morphs into a marketplace, personal information has devolved into a commodity. Want to reach, say, 25-year-old males who like country music, earn more than \$53,000 a year, and live in Chicago? No problem. Data-mining companies such as Boston's Art Technology Group can give interested companies their addresses. Want to snoop on a business rival? MyEureka and other brands of business intelligence software will help fish out tax filings, corporate credit-card receipts, and other goodies from offline databases.

Now, with the proposed merger of online advertiser DoubleClick Inc. and Abacus Direct Corp., a direct-marketing outfit, the tools that companies deploy to snoop on consumers could become much more refined. Abacus Direct stockpiles data on more than 2.4 billion consumer purchases through 1,100 catalogs. DoubleClick, which places and evaluates online ads over a network of 1,500 Web sites,

wants to meld Abacus' data with its own on Web surfing habits so it can target ads to those most likely to buy.

If Washington regulators don't block the \$1 billion merger, DoubleClick will gain access to Abacus' data on the purchasing habits of 88 million U.S. households. So in theory, you could be browsing a Web page on mutual funds and seconds later, get a call from a

browse an AIDS newsgroup, it might trigger a flurry of E-mail hawking some new AIDS drug. Once your online persona is linked to your offline identity—name, address, and Social Security number—those messages could show up in your office E-mail. And depending on who owns the information, it could wend its way to your health insurer.

It's the linkages that are really jarring. Currently, cookies that advertisers place on a Web user's computer hard drive track that person's online behavior. But today, these cookies don't reveal a person's name or address. The DoubleClick-Abacus deal would change that. It would, for the first time, link a large offline database—with name, address, and credit-card info—with data about shoppers' online habits.

That makes privacy activists howl. In a June 21 letter to DoubleClick and Abacus, activists said the merger would create a "surveillance machine of unprecedented breadth and depth" that jeopardizes Net users' anonymity.

To be sure, no company hoping to build trust among customers would willfully stomp all over their privacy. And DoubleClick President

Kevin Ryan argues that consumers can simply tell DoubleClick they don't want to be put into a database. All this is clear from DoubleClick's "opt out" policies, which are posted on the company's Web site.

But that's asking a lot of online consumers: First, they have to know that they are being tracked. Second, they have to know who is serving up all those banner ads. Then they have to visit DoubleClick and track down its policies.

That's daunting even for busy Netizens, let alone for the two-thirds of Americans who have yet to venture online. And even if every consumer knew all about opt-out policies, who is going to hold DoubleClick—or any other data-mining company—to the promises in their privacy policies?

Most online companies insist that they can regulate themselves. Maybe. But as online direct marketing becomes more successful, the value of personal information will soar—as will the temptations to abuse it. Right now, victims have no clear legal recourse. And while nobody wants a Big Brother in Washington policing the Internet, someone must enforce standards for the handling of personal data. Right now, only the federal government can fill those shoes. ●



telemarketer with some eerily dead-on sales pitch for financial products.

Is this sinister, or merely creepy? The answer lies in scenarios that exceed DoubleClick's reach today, but may not tomorrow. Abacus tracks your taste in clothes. But other data-miners may be more interested in your medical records. Pair their information with data from your "clickstream," and the first time you visit a doctor for an HIV test, or

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by

MARCIA STEPANEK

Weyerhaeuser's door plant was on its last

From its drab, corrugated-metal exterior, Weyerhaeuser Co.'s Marshfield (Wis.) door factory, deep in America's dairy belt, doesn't look like much. But inside, the 100-year-old timber giant is carving out its own piece of the Internet revolution.

Four years ago, the plant was on its last legs—what Weyerhaeuser Vice-President Jerry Mannigel had called a “dead dog” of a door plant, besieged by bloated costs, flagging sales, and bad morale. Even Mannigel, a Marshfield native who initiated a factory redesign in the mid-1980s, had to be begged to return from his job at another facility to see if things could be turned around. “The situation had gotten so bad that Marshfield was operating at half capacity but costing us the equivalent of full capacity,” he says. And morale couldn't have been worse. Says Mannigel, whose father also used to work at the plant: “You had to practically beat people with a stick to get them to come back to work every morning.”

Bad morale: “You had to practically beat people with a stick to get them to come back to work”

What a difference the Internet has made. Today, the plant—which cuts, glues, drills, and shapes customized doors according to each buyer's desire—is profitable again, and revenues are growing at an annual 10%-to-15% pace. Better management has been key. But productivity experts give much credit to Weyerhaeuser's installation of a state-of-the-art in-house communications network that uses the Internet to compare prices in a heartbeat, boost on-time deliveries, and track orders as they move through the plant.

NEW RULES. Since phase-in began in late 1995, the technology, dubbed DoorBuilder, has helped the plant to double production—to more than 800,000 doors annually. Tracking software has improved the plant's record for complete and on-time

deliveries—up from 40% to 97%. The plant's share of the U. S. commercial door market has zoomed from 12% to 26%. And since 1993, the year Weyerhaeuser thought it might shut down the plant, the factory's return on net assets has grown from -2% to 27%—well beyond this year's companywide goal of 17%.

Now, Weyerhaeuser is taking DoorBuilder even further, rewriting the rules of the doormaking industry. In the past year, Weyerhaeuser has begun to experiment with extending its DoorBuilder network beyond the plant's borders to some of its most valued customers—key distributors. That communications link is speeding up the ordering process for customers, while elim-

inating costly errors, waste, and delivery snafus. The result: Weyerhaeuser can offer faster turnaround and, in some cases, lower prices that rival doormakers may have to match. At the same time, distributors that want to get in on the improvements are being forced to automate their shops so they can hook into Weyerhaeuser's network.

For many of Weyerhaeuser's distributors, the arrival of the Internet to their old-line businesses is jarring, and not altogether welcome. Charles Hummel, CEO of Pleasants Hardware Co. in Winston-Salem, N. C., the nation's largest door distributor and one of Weyerhaeuser's biggest customers, gripes that DoorBuilder will require him to put computers, extra phone lines, and trained tech staff in his 15 branch offices. Hummel is hoping he can hold out but concedes



he may have to bite the bullet because of Weyerhaeuser's clout. “It's a love-hate relationship with Weyerhaeuser right now,” says. “If you're not on DoorBuilder, your lead times may actually increase.”

Such upheaval is the inevitable by-product of E-engineering in the timber industry and just about everywhere else these days. High-tech and low-tech companies alike are scrambling to remake their businesses from top to bottom so they can tap into

to the Door to Profits

An in-house information network showed people how to work better and smarter



Mannigel says that, before DoorBuilder became operational, "the questions of cost and every month were a crapshoot." Today, there is no more guesswork or favoritism

of the Net. At the heart of these efforts are communications networks much like Weyerhaeuser's, called intranets, that connect all the workers in the company while tapping into vast databases of information, multi-floor operations, supplier inventory, price lists, and order-taking. According to International Data Corp., an estimated 52% or

more of manufacturing companies with revenues of \$1 billion or higher are considering, or already have, intranets. "From its original role as a data repository, the intranet has rapidly grown to become the central nervous system of the enterprise," says a May report from Concours Group, a research and consulting firm in Kingwood, Tex.

As essential as that may sound, not all intranets have paid off. Some companies have stopped with a Web site or have failed to exert the type of leadership and flexibility needed for the technology and the cultural changes it brings. Or, says Ernst & Young consulting's chief technologist, John Parkinson, "they end up costing far more than expected and drown managers in too much information." Even at Marshfield, Vice-President William Blankenship—who persuaded Weyerhaeuser's top brass to O.K. the plant's intranet, admits that "it has been a long haul." Weyerhaeuser's initial \$2 million investment has more than quadrupled. And when Mannigel made the system fully operational last February, glitches and worker errors temporarily slowed deliveries and hampered production.

CUSTOM CRAFT. Executives remain committed to Marshfield as one of a handful of examples of E-engineering that is working in the U.S. And Blankenship says Weyerhaeuser is just beginning to discover what DoorBuilder can do.

To understand just how dynamic DoorBuilder is, consider the dramatic changes it has brought to the single task of order-taking. At Weyerhaeuser, this has long been a painstakingly complex job, since each door is custom-built, according to an amazing 2 million different configurations—from size, style, and color to the veneer and hardware options. One door might have a round window and a core to withstand 40 minutes of fire; another could be laminated with white plastic stars, destined for a theater on Broadway. Before DoorBuilder, says Mannigel, "we had been buried in information, and our inability to handle it had become the bottleneck of this business. Every six or seven doors or so that we make here are likely to be different from those that come before and those that come after."

DoorBuilder sorts through all that information and calculates the math in sec-

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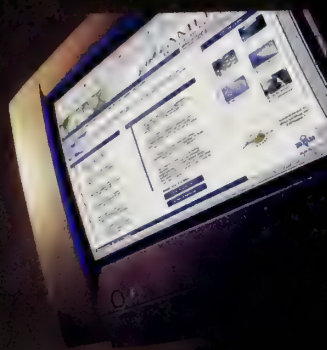
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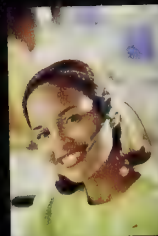


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onds. The days when distributors, builders, and Weyerhaeuser reps would haggle for weeks, if not months, to hammer out an order are gone. And, if customers are plugged into Weyerhaeuser's network, they can bypass Weyerhaeuser's reps altogether by typing in their order on the Marshfield plant's Web site. All orders are final once the customer pushes the "submit" button on their computer. Sometimes, handwritten substitutions were slipped into the process at the last minute, as a special favor to a particular customer. "Today, there are no special favors," Mannigel says. "Now, every order is equal."

Indeed, DoorBuilder's order-entry software is so sophisticated that it is based on the same system Boeing Co. uses to configure its complex 777 airplane wings. "If a certain hinge can't be used on a certain door in a certain city, then DoorBuilder will reject that as an option and tell you why," says Mannigel.

Converting orders from paper to bits also has reduced the number of errors. Previously, orders were stapled to each door and would inevitably get torn off or lost at various times during production. "We had one guy who used to collect these off the floor and put them in a big bin, and every two weeks or so, he would

"For the first time, we had proof some orders we not making any money, so we set out to fix th

throw them out. We were having to redo orders like crazy," says Mannigel. Weyerhaeuser figures DoorBuilder has reduced errors drastically, cutting two to three weeks off turnaround times.

The new system is making the company a lot smarter—and tougher—about pricing, too. In the past, prices were based on hunches, special relationships, and haggling with customers and suppliers. "The questions of cost and price every month were a crap-

shoot," says Mannigel. With DoorBuilder, there is no more guesswork or favoritism. Thanks to more precise information on costs and lead times, doors are now priced according to what each option actually costs to the total cost of manufacture. Executives who had once prided themselves on their pricing prowess discovered that some

their generations-old calculations were off. In one case, Mannigel says, "a distributor who we thought was one of our best customers was actually costing us money." Lee Kirchman, the plant's vice-president of marketing and sales: "The machine was more than we did."

The result: Weyerhaeuser now charges some customers more. If they balk, DoorBuilder can instantly offer up different options that are cheaper. "No way that we

HOW TECHNOLOGY OPENED THE DOOR TO PROFITS

	PROBLEM	SOLUTION	PAYOFF
Orders	Packages of customized doors were configured manually from more than 2 million options. The process could take months, with time spent on phone, fax, and mail—haggling with suppliers, distributors and buyers. For the distributor, placing an order could take weeks.	Customers assemble their own door packages through a "virtual distributor"—a Web site on the Net or direct link by extranet that allows them to tap into suppliers' lists and get instant packages and pricing.	Orders get placed in minutes, with fewer errors, faster delivery times, and lower costs to Weyerhaeuser. Turnaround time has shrunk by three weeks or more.
Pricing	Pricing was based on hunches and individual relationships between customers, suppliers and distributors.	A computerized cost-tracking system now bases prices on customer value profiles—from creditworthiness to volumes ordered over a period of time—and the cost of every option that gets built into a finished door.	Some prices went up; some went down. Weyerhaeuser stopped losing money on the production of unprofitable doors, saving millions of dollars.
Customers	Accepted almost any customer and order—even though some customers cost Weyerhaeuser money.	Using new database and DoorBuilder software, the plant now knows its customers better and can be more choosy about which orders it bids for and which distributors it chooses to do business with.	At least 50% fewer customers, but a doubling in order volumes to more than 800,000 doors this year. That boosted the plant's return on net assets from -2% five years ago to +24% this year.
Tracking Orders	Handwritten notes and printed forms stapled to each door for tracking orders through the factory were easily lost, inaccurate, and confusing.	Computer system tracks progress in real-time, with no changes in orders allowed after they are submitted by customers.	Fewer errors, better scheduling, faster delivery, more precise inventory control.
Delivery	On schedule and complete only 40 to 50% of the time.	Using tracking and scheduling software and a communications network inside the plant, Marshfield is able to deliver complete orders on time 97 to 100% of the time.	Door deliveries are speeded up—and Weyerhaeuser gets paid faster when performance is fast and more consistent.

2/3 of all online shopping carts are abandoned

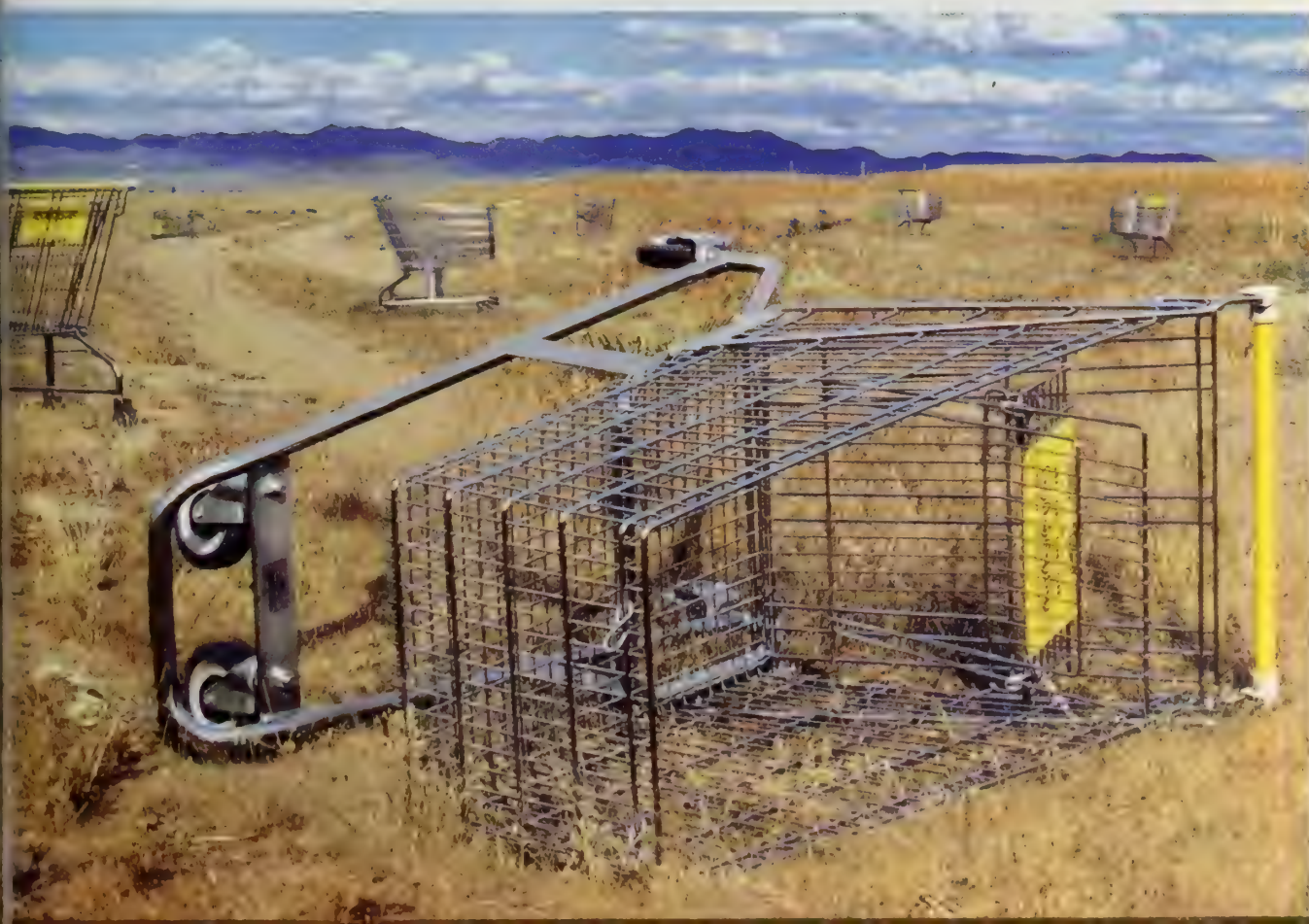
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Give your site a pulse.





Says Jerry Lenger, a distributor in St. Louis: "What DoorBuilder has started is like dominoes in this industry"

have worked without the data we got from DoorBuilder," Mannigel says. "For the first time, we had proof some orders weren't making any money, so we set out to fix that. Now we can show a customer precisely why we're asking for a higher price."

Ditto suppliers. Kirchman recalls that in the days before DoorBuilder, the company considered Columbia Forest Products

The biggest surprise of all: Armed with this information, Weyerhaeuser actually refuses some customer orders now or redirects them to competitors—unimaginable before. Customers also are ranked by their creditworthiness, price demands, average order size, and their willingness to go along with the company's new way of doing things. That has weaned Weyerhaeuser's

With precise info on costs, "this idea of 'whatever the customer wants' is gone," says Mannigel

Co. one of its best suppliers of veneers, both on price and quality. "But we did an analysis of them with DoorBuilder, and—surprise—they ranked way, way down on the chain," says Kirchman. So Weyerhaeuser went back to Columbia, showed the company the data and gave them six months to improve—or it would start buying most of its veneers elsewhere. Now, each quarter, Marshfield's purchasing staff sits down with each key supplier and shows them how they stack up on the value chart, hammering out prices accordingly.

roster of door distributors down from roughly 500 in 1995 to approximately 200 this year—but with more volume and profit coming from each of the mostly larger customers that remain. "This idea of 'whatever the customer wants' is gone now," says Mannigel.

What's more, customers now have to "put some skinny on the table," Kirchman says—just to be able to use DoorBuilder to place their orders. The 12 distributors starting to experiment with having a direct link to DoorBuilder have each shelled out be-

tween \$3,000 and \$5,000 for the software, a dedicated phone line, training, or the cost of in-house order-placers. According to some, DoorBuilder has added an extra day or two to the order-taking process on the other end. "What Weyerhaeuser is doing is transferring some of its order work to the contributor," grumbles Hummel.

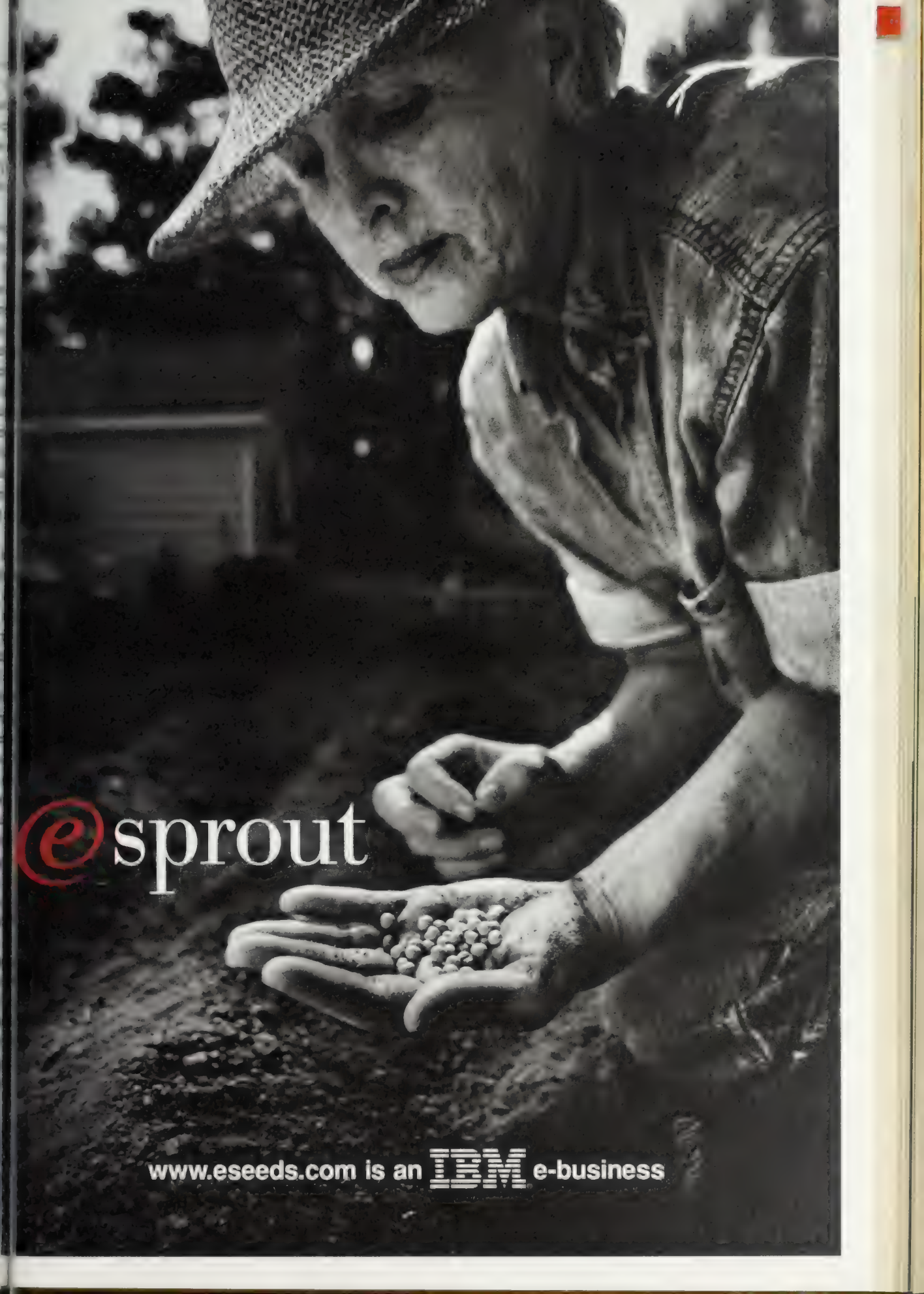
Other distributors see their investment in DoorBuilder as money well-spent. Ed Dirtzu, president of Glewwe Door in Eden Prairie, Minn., says the extra expenses are a price to pay to get on-time deliveries. "We can easily lose what we spent on DoorBuilder if your orders get delivered wrong or are late," says Dirtzu. "We figure DoorBuilder will pay for itself within the year. And it could help make distributors more efficient. Says Gerald Lenger, executive president at H&G Sales Inc., a St. Louis distributor using DoorBuilder: "What DoorBuilder has started is like dominoes in this industry. And those who don't keep up probably be left behind."

DoorBuilder has even had a hand in wiping out nagging problems with inventory. Previously, a shipment of, say, wrong veneer couldn't be traced back to its supplier. Now, DoorBuilder can pinpoint which manager sold it—along with where and in what condition it arrived. Kirchman, for example, recalls that before DoorBuilder, the plant had been buying very expensive mahogany door veneers for a year when they hadn't used up a single sheet of their old supply. "All that our inventory system told us was that the items were gone and so we ordered more," says Kirchman. "It's incredible how much this technology can challenge our basic assumptions about things." DoorBuilder won't schedule any door production unless the raw materials are available to build it.

Ultimately, E-business is changing the door business. It's not the first industry to feel the power of E-business. But Weyerhaeuser's experience suggests that even the most unlikely candidates for an E-business overhaul will have to open their doors to the information revolution—maybe sooner than they'd like. ●

ONLINE LINK

For more about intranets, check out our Q&A with John Parkinson, chief technologist for Ernst & Young consulting, on ebiz.businessweek.com.



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Read this if you want to start selling stuff on the Web now.

You hear the success stories: e-commerce is creating mega-brands virtually overnight. e-commerce is transforming old companies into Web-savvy players. e-commerce is the great equalizer.

Fine. Now how do you do it?

Information Week writes: "e-commerce is an engine for high revenue growth — and even higher Web site unpredictability." And from *Forbes*: "e-commerce looks promising. Now comes the hard part: making it work."[†]

Fact:

IBM scalable servers help **Charles Schwab's** customers trade over \$2 billion a day online.

The power of e-commerce is obvious (just take a look at the stock market). But gearing up so you can sell online can be a lot trickier than it looks at first glance.

It doesn't matter what you're selling or what kind of business you're in. You can be a company of thousands, hundreds, or maybe the company is just you. Regardless, IBM can help.

We can show you how to seize e-commerce opportunities and understand the issues. And there are significant issues: Pricing and distribution issues. Inventory issues. Back-end issues. How do you connect with your suppliers? Your vendors? What about Web traffic and security? What about customer service?

There's no one answer. No owner's manual or magic formula. e-commerce solutions are about as different as the companies that are taking advantage of them.

Fact:

An IBM RS/6000® Web server helped **REI** grow worldwide online sales by 360% in 1998.

For example, how does a financial broker plan and manage for growth when the very nature of the business is unpredictable and volatile? If you're schwab.com[†] — the world leader in online investing — you do it with a massively

scalable IBM Web solution that can handle a large volume of traffic as well as over \$10 billion worth of transactions online every week.

What if you're a regional retailer and want to go from having a few store locations to being a world player? If you're rei.com you employ a powerful IBM e-commerce solution that enables you to sell everything from camping gear to kayaks, reaching customers nearby or in the Far East (REI is now doing a brisk business in Japan, with this year's online sales exceeding last year's by an extraordinary 400%).

And what if you're a tried and true brand and want to expand your business? If you're nationalgeographic.com you use IBM e-commerce technology to relaunch your online store, merchandise new products and increase online sales.

Even emerging companies like eseeds.com, cdwarehouse.com and champagnelady.com are coming to IBM for help in taking advantage of e-commerce opportunities.

IBM has everything from robust e-commerce software solutions, like WebSphere®, Net.Commerce™ and HomePage Creator, to high-volume IBM Web servers and Web hosting services.

For e-commerce expertise in industries as varied as manufacturing, banking, retail and health care, there are the 130,000 consultants, strategists and implementers of IBM Global Services. These are people with "been there, done that" experience, who have the tools to help you build and maintain a secure, scalable e-commerce site.

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We're a medium/large corporation seeking to achieve strategic competitive advantage using e-commerce. We have a significant IT department.	 • Determine effective e • Integrate with existi • Get support to optim • Maximize ROI.

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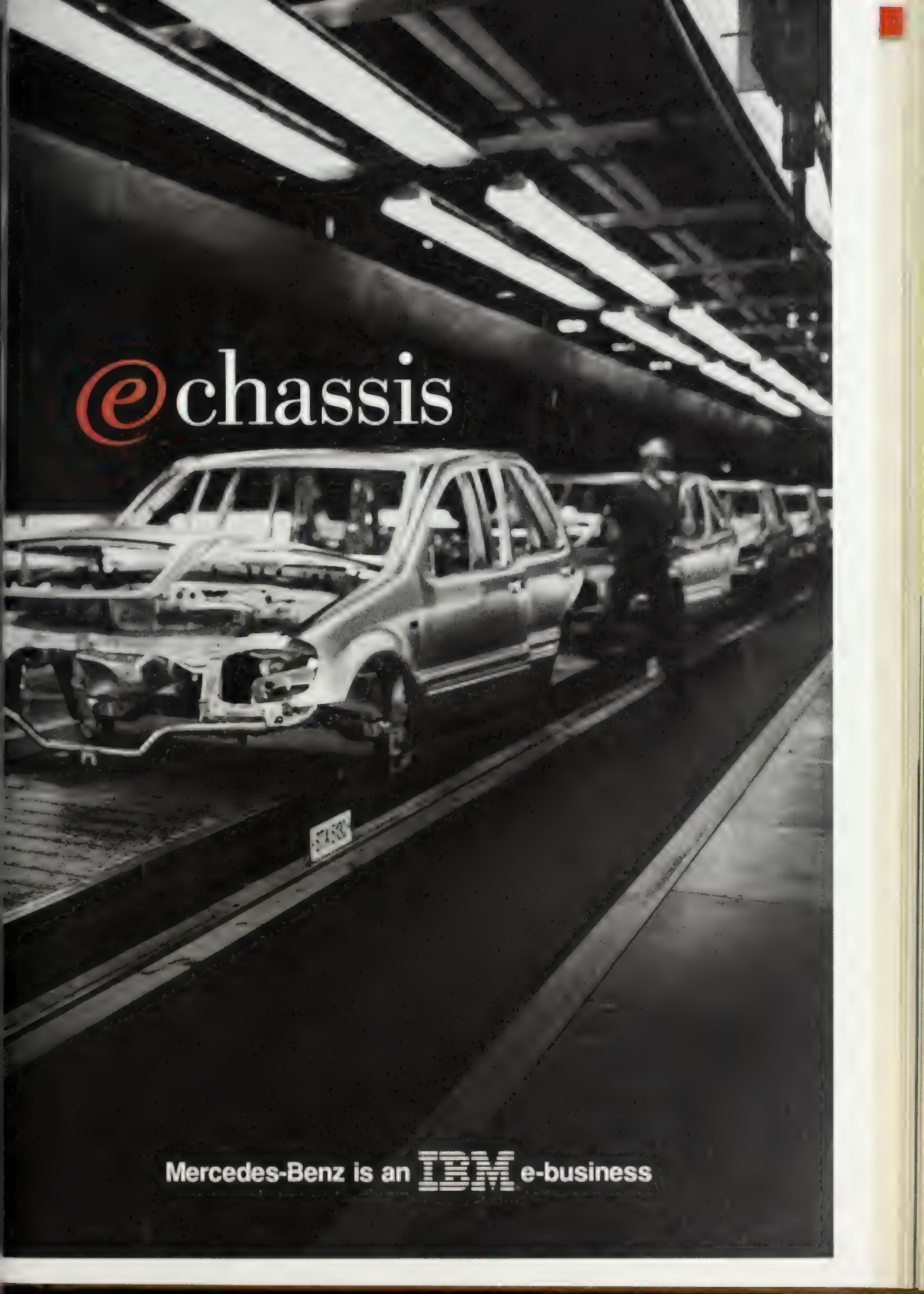
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A black and white photograph of a hula dancer figurine on a car dashboard. The figurine is a woman in a traditional hula costume, including a grass skirt and a flower lei. She is holding a small object in her right hand. The background is a blurred view of a car's interior, showing the dashboard and steering wheel. The text "@hula" is overlaid on the image.

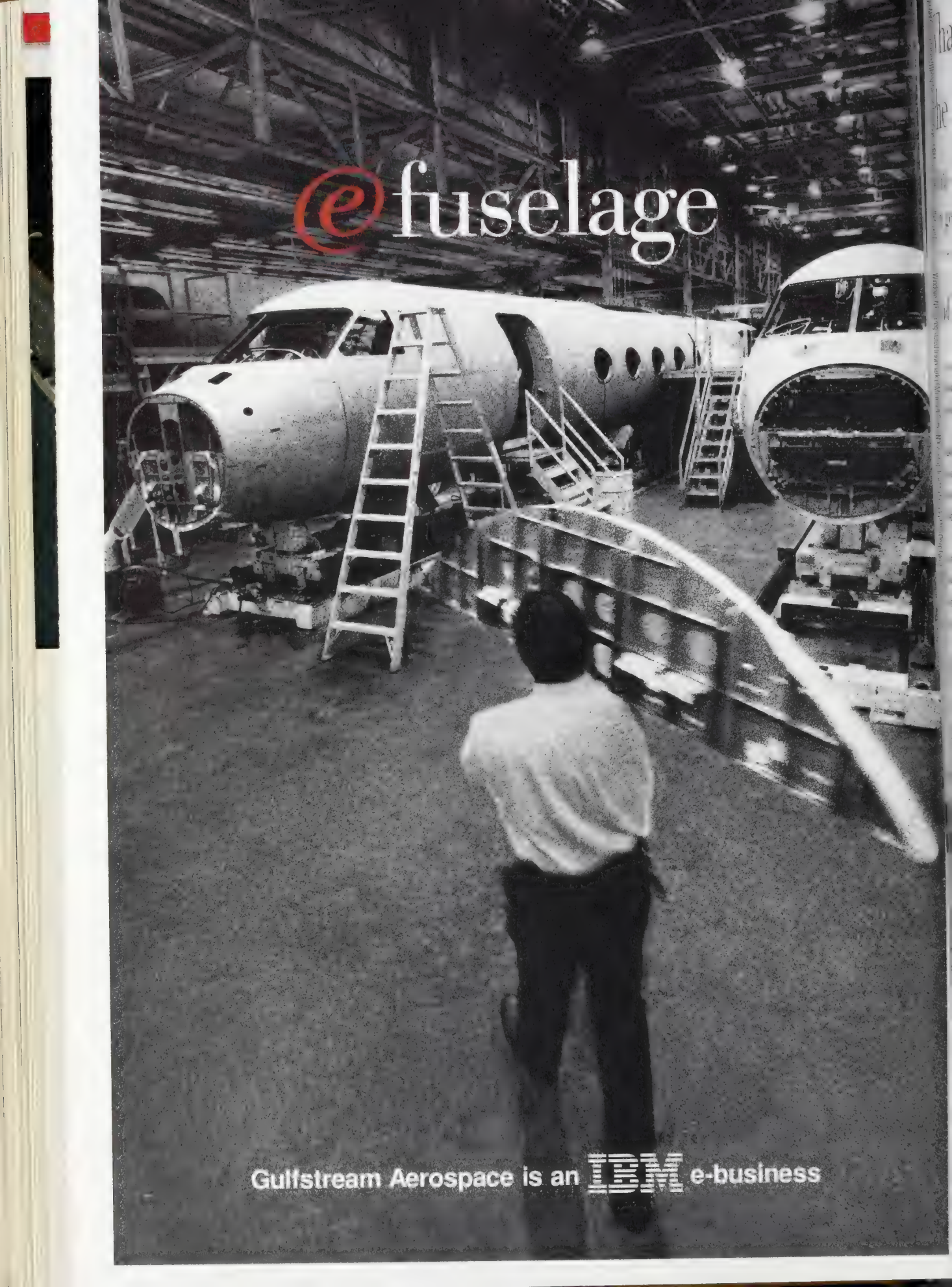
@hula

www.hawaiian-gifts.com is an **IBM** e-business

A black and white photograph of a car chassis on an assembly line. The car is in the foreground, with its front end partially assembled. A worker is visible in the background, standing next to another car chassis. The scene is illuminated by overhead fluorescent lights, creating a sense of depth and perspective.

@chassis

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@fuselage

Gulfstream Aerospace is an **IBM** e-business

What? You don't think the page on the left applies to you?

While online sales of books, CDs, videos and other consumer products are getting all the headlines, there is another big opportunity in e-commerce: businesses selling to other businesses.

And IBM is helping thousands of them do just that.

Check out these numbers," wrote e.biz in the March 22 edition of *Business Week*. "E-commerce between businesses is five times as much as consumer e-commerce, or about \$43 billion last year."

It makes sense, actually. Businesses already run their entire operations on computer networks and use those networks to communicate between locations, subsidiaries and suppliers. For them, adding Web-based e-commerce systems is simply the next logical step.

But what do you need? Where do you start? What are your options? How do you avoid investing a fortune in hardware, software and administrative overhead? What e-commerce solution is right for your company and your industry?

IBM helps companies answer questions like these every day. Companies like Mercedes-Benz, Shell Services International, as well as more modestly sized companies like PETsMART and High Valley Safety Supply Co.

are selling. This chart can show you how.

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Also ready to go to work for you now (as we mentioned on the previous page) are the more than 130,000 consultants, strategists and implementers of IBM Global Services. These are people who have real world problem-solving experience. And because they know specific industries — yours — they have the expertise it takes to help you make the most of the e-commerce opportunities that are out there.

These are just a few of the ways we're helping businesses:

Direct online sales. Just as IBM is helping Gulfstream sell airplane replacement parts to corporations worldwide, we're also helping retailers, financial companies and a variety of manufacturers make the most of e-commerce.

Vendor extranets. Setting up a network that helps link you to your vendors can cut inventory carrying costs and make your company more responsive. After employing an IBM extranet, PETsMART, the pet superstore, estimates a 20% reduction in its inventory of imported products.

Dealer-distributor extranets. IBM has helped companies like SAAB link directly to their dealer networks — enabling dealers to order and process transactions online. This increases dealer productivity and reduces paperwork, sending profits direct to the bottom line.

Online procurement. e-commerce is also about streamlining. For IBM (yes, we're an e-business, too), Web-based procurement means a \$240 million savings. This has reduced the number of paper invoices from five million to zero.

Fact:

Gulfstream now processes 7 out of 10 parts online, with the help of an IBM RS/6000 Web server.

Fact:

An IBM Global Services electronic supply chain solution helped Mercedes increase M-class production by 20%.

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Halsey Minor's Major Plans

DA HIMELSTEIN

the CEO wants CNET to offer everything there is to know about tech products and news

In many ways, Halsey M. Minor, chief executive of Net publisher CNET Inc., was born to run an Internet company. He has long been an innovator with supreme confidence: At age 9, he invented a triple-decker version of checkers and sent his creation to Milton Bradley, certain the game giant would snap it up. It didn't, but Minor kept hatching money-making schemes, including, in college, a computerized apartment-finding service that he abandoned once Minor left his hometown of Charlottesville, Va. And he's a gambler to the core: For his high school, he chose the private, all-boys Wood-

berry Forest School because of its computers. "I've always been fanatical about technology," he says.

Little wonder, then, that Minor has grown up to be the archetypal Netpreneur. In 1992, even before Marc L. Andreessen met James H. Clark and formed

browser pioneer Netscape Communications Corp., Minor was hard at work on CNET, a company that uses online services and TV to deliver news and information about technology. Despite scads of obstacles, such as near personal bankruptcy in 1994, Minor felt certain that his baby would be big. And he was willing to risk everything to prove it. "I could go bankrupt, but I was not going to quit," he says. "I have learned that you can will success."

Minor's belief has paid off. At 34, he presides over a 540-person company in San Francisco that went public in 1996,



gambler: Minor is stepping back from day-to-day operations and launching a venture-capital fund with his own \$40 million

valued at more than \$3 billion. CNET's investments of \$23.5 million in other Net startups have delivered more than \$650 million in gains. As for Minor's personal fortune: It has topped \$500 million. Minor, his wife, and three kids (all under the age of 3) live in the swank Seacliff neighborhood of San Francisco, with sweeping views of the Pacific Ocean and the Golden Gate Bridge.

Minor is already saying he wants to retire by 40 to focus on other interests

But now, even though the world seems to be at his feet, Minor is suddenly talking about making colossal changes in his life. At CNET, he has assembled a new senior management team so he can step back from day-to-day operations to focus on the company's next wave of growth. At the same time, he's launching a \$40 million venture-capital fund with his own money. And he's even discussing retirement, saying that by the time he's 40, he wants to focus on other interests, such as education.

TECHIES' DELIGHT. For now, though, CNET is at the top of his mind. Minor is cooking up grand plans to turn it into one of the elite destinations on the Web. For all its achievements, CNET, which brings together buyers and sellers of computers and consumer electronics, remains largely a niche collection of 10 Web "channels" and five TV shows visited most often by techies. Researcher Media Metrix Inc. ranks the company's Web sites No. 17 among the most popular cyber destinations, and it has only 4% consumer brand recognition. Bottom line: The company has yet to live up to Minor's grand vision.

Minor regrets that in the past he abandoned his projects, like the apartment-finding service, too early. He vows to stick with this one. He has in mind a worldwide network with the name-brand appeal of an ESPN or CNN that reaches out to hundreds of millions of computer owners, from newbies to graphics hogs. And he wants it to be incredibly broad and deep, offering everything from directions to local computer stores to information on who should host your Web site. He believes there is literally nothing users shouldn't be able to find out about technology on CNET's sites. "Our goal is everything—every product and every service within our category—and to

do it on a global basis," says Minor.

No company, on- or offline, has achieved such completeness. Most of the other so-called niche portals offer relatively narrow slices of information within their categories. ESPN.COM, for example, delivers reams of information about professional teams but nothing about how to shop for baseball gloves. Even CNET's Web sites are only "10% there," says Minor. He has a

lot of empire-building to do. "The foundation has been laid," says analyst Tonia Pankopf of Goldman, Sachs & Co. "Now, it's just a question of being able to increase the number of users and vendors on CNET's network." To make that happen, Minor has decided to forgo profits, which in 1998 were \$3.2 million on revenues of \$19.6 million—mostly from selling advertising. He'll spend \$100 million in the next 18 months on building brand and reach.

To invent the new CNET, Minor has to

play a dramatically different role. On 1, publishing industry veteran Richard Marino joined as president of the company. He follows a string of other hires in the past 18 months—moves made largely to beef up the company's senior management team and rid Minor of operational responsibilities. With the new additions, Minor has trimmed the number of executives reporting directly to him from 14. "I'm working on transitioning from a passionate, product-oriented CEO who runs a company into being to being a more stable hand on the tiller," says Minor.

That's not to say Minor is any less ambitious. One big project in the works: gathering Netizens into one big purchasing club. He's already hard at work on a plan to give buyers the power that sellers typically have. How? By using his network to bring together buyers of products who, en masse, can demand better prices from suppliers of everything from cell phones to laptop computers. Minor plans to introduce the service later this year.

Down the road, he believes he can

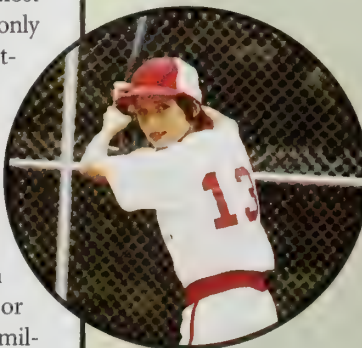
HALSEY MINOR

► Born

Dec. 6, 1964, in Charlottesville, Va.

► Education

BA in anthropology from the University of Virginia, 1987.



► Career

Investment-banking analyst at Merrill Lynch in New York, 1987-89. Two years as CEO of Global Publishing, which he started inside Merrill to build its intranet.

Assistant to the Chairman at New York head-hunting firm Russell Reynolds from 1991-1992. While there, wrote the business plan for CNET, the online and cable-TV company he launched in San Francisco to deliver information about the technology industry.

► Ambitions

Minor, now 34, had planned to retire from CNET at age 35—and briefly considered a political career before deciding that he wouldn't like the politics. Now, because so much is happening on the Internet, he plans to stay on as CEO until he's 40.

► Family

Wife, Deborah, and three children, all under age 3. No twins, either.

► Relaxation

Dancing with the kids.

► Favorite book

Undaunted Courage, about the trials and tribulations of the Lewis and Clark expedition.

► Favorite movie

Star Wars—the original—because it's where anthropology meets technology.

► Hobby

Golf. Minor has a 17 handicap that's "going the wrong way."

► Car

BMW 740i, which fits three kid seats and four sets of golf clubs.

► Heroes

Little League coach Frank Laymen, who taught Minor how to get the most out of himself.

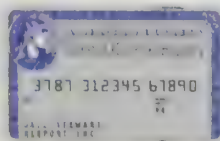
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tend CNET's business model to other vertical markets, such as auto sales, real estate, or sporting goods. And, as with CNET, he'll create TV programming to make the brand a household name. "Halsey is somebody who is really very alert to the technology marketplace and peering ahead into the future," says Amazon.com Inc. CEO Jeffrey P. Bezos. "He is an incredibly engaging visionary."

But not necessarily the best manager. Indeed, CNET had no formal employee-evaluation or budgeting process in place until late 1997. As for managing individuals, Minor's method of choice has been either to bathe employees in lavish praise, known to some as getting the "Halsey bear hug," or to flame them in hot-tempered E-mails sent at all hours of the day or night. "It's sort of a company joke," says Robin P. Wolander, a CNET executive vice-president. "How many flame-mails did you get from Halsey at 6 a.m.?"

DETAIL MAN. Sometimes, Minor nearly drives his employees nuts. Before the launch of CNET auctions in May, for example, Minor was checking the beta site nearly every 15 minutes, offering developer Nihad Hafiz tips and feedback on each and every change that was made. Unable to complete any task because of the flood of interruptions, Hafiz finally posted a notice on the front door of the service. It read sim-



Grand ambition: Minor (here in his office) says he abandoned other projects too early. He vows that won't happen with CNET

cisco-based directory for online music. And he's putting money behind Salesforce.com, a Silicon Valley company involved in sales-force automation on the Web.

And then there are Minor's political aspirations. Two years ago, he briefly toyed with vying for the Virginia governorship. While he no longer harbors any desire to run for office, Minor does want to help advance the causes of the technology industry, such as open cable access. In 1997, he hosted a high-profile dinner for Bill and Hillary Rodham Clinton at his home. On July 9, Minor, a registered Independent,

Minor no longer aims to be governor of Virginia —but wants a say in U.S. technology policy

ply: "Halsey, please stop looking at this."

Minor says he will still pore over each and every page on CNET's network. But he no longer wants to be the last word on how the products or services should look and feel. Instead, he plans to use more of his time to build CNET and to nurture some pet projects of his own. One example: the \$40 million venture-capital fund he is in the middle of forming. The idea is to invest in promising Internet startups that target areas CNET would never touch. He has already put more than \$1 million into his first venture, Listen.com, a San Fran-

hosted a group of 21 congressional Democrats interested in networking in Silicon Valley. "He's definitely a rising star and will become more and more prominent in the technology milieu," says Silicon Valley financier Sanford R. Robertson.

That may be short-lived. Minor says he's willing to devote only six more years to high tech's cause, or for that matter to the running of CNET. Minor says that by the time he turns 40, he wants no more of the headaches from employees and shareholders that come with running a large public company. He hopes he'll be in-

involved in education, perhaps by becoming a professor going back to school.

That may help him make more room for his few indulgences. Apart from his father, Minor spends most of his time on the golf course where he has a 17 handicap. Friends say he's just as intense on the fairways as he is in the virtual world. "Halsey is one of the most competitive people I've ever met," says pal Theodore W. Waitt, chairman and CEO of PC maker Gateway 2000. Jeffrey Moore, who was a guest at Minor's wedding, says he and Minor enter the same golf tournament every year in New York. "We are always derprepared and overclassified," says Moore. "But Halsey is convinced we're going to win from the first hole."

Another priority is Minor's family, which grew up comfortably in small-town America—his father was a real estate agent and mother a breeder of show horses. He bought a farm in Virginia to be nearer to his wife and kids. And he has his heart set on spending time with his wife and kids. So that he can have breakfast with his children, he no longer schedules meetings before 9 a.m. Nor does he sit on the boards of directors of other companies because of the time commitment it would require.

Friends say Minor talks a good game about wanting to relax, but they have their doubts. After all, even on his honeymoon, Minor amassed a \$1,200 phone bill chatting with the office about a pending investment. "He wants to slow down, but he doesn't have the ability to," says friend Jeffrey Waitt. "He believes he has a business and a company with an enormous way to go. And if Minor's next scheme doesn't work out—just like with the triple-decker checker game—he's bound to try another."

— Contributing: Robert D. McWhorter
in San Mateo, Calif.

ONLINE LINK

MORE INFORMATION ON THE WEB

For a Web site review of CNET.com, check out Clicks & Misses on July 23 on ebiz.businessweek.com

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Can You Sell Groceries Like Books?

Louis Borders' online supermarket may be the most innovative E-commerce venture to date. If Webvan succeeds, the rewards will be huge

Two years ago, Louis H. Borders was opening a FedEx package that had arrived at his Silicon Valley home. It contained some hard-to-find Japanese spices and specialty foods that the founder of bookseller Borders Group Inc. had ordered from

a catalog. That's when it hit him: Retail through the Internet would never become really big unless someone could discover a more efficient and cheaper way to get the products ordered to people's doorsteps. "I kept thinking I would need a loading dock outside my house to use the Internet to buy things," says the 50-year-old Borders, who left the bookstore chain in 1992 to start his own investment firm. "And on top of that, I'd have to pay \$10 per package."

Since that prospect would be no more palatable to the average Jane than it was to Borders, he decided to devise something that would be. The result is Webvan Group Inc., a Foster City (Calif.) online grocery superstore that is arguably the most ambitious E-commerce initiative to date.

STODGY RIVALS. It's not just because Webvan is aiming to shake up the stodgy, highly fragmented grocery business. And it's not just that Webvan has raised \$122 million so far from such bigwigs as CBS, Yahoo!, Softbank, and LVMH—an enormous sum given that the median amount of venture capital raised by upstarts is \$20 million, according to VentureOne Corp. What makes Webvan's ambition such an attention-grabber is that the company intends to overcome one of the most expensive operating challenges imaginable for an Internet company: local delivery of high-quality dry

and perishable goods to consumers' homes, at competitive prices, within a 30-minute delivery window chosen by the customer. "We are building the last mile to the consumer," says Borders. "It's a huge logistical problem."

No argument there. If Borders can pull it off, Webvan may well have nailed the as-yet-unrealized dream of the Internet, which is to streamline cumbersome, age-old business practices to bring consumers the ultimate in convenience. "If Webvan cracks this nut, it will reap huge rewards," says

Traditional grocers are the model for food quality, FedEx for the hub-and-spoke delivery system

analyst Evelyn Black Dykema of Forrester Research Inc. "But can it do it?"

Clearly, scores of frustrated shoppers hope so. Since Webvan's June 2 launch in the San Francisco Bay area, more than 10,000 people have signed up for the service. That's not a bad start, considering that rival Peapod Inc. has taken 10 years to amass a customer base of just 100,000 households.

So far, no one has been able to make much of the online food business. In 1998, less than 1%, or \$235 million, of the \$720 billion grocery market went to Net companies, says Forrester. By 2003, online gro-

cers are expected to make up little more than 2%. The problem: Consumers have been largely disappointed by the service selection, and prices they have gotten from a slew of upstarts. Even Peapod, the best-known member of the online-grocer pack, has struggled to find an economic model that works: It is still losing money in five of eight markets.

WARM AND FUZZY. That's why Webvan says it's starting from scratch—almost. Borders has cobbled together the best people and operating practices from a myriad of cyber and real-world businesses. Federal Express Corp. serves as the blueprint for Webvan's hub-and-spoke delivery system. Webvan also has dipped into FedEx' talent pool for some of its most senior executives. Traditional grocers have been the model for maintaining food quality in transit. Wal-

Mart Stores Inc. has served as an example of breadth of product selection. And for his Web site, Borders has taken a page from Yahoo! for speed, Amazon.com for the shopping experience, and eBay for the warm-and-fuzzy feel.

Webvan has hired some 80 software programmers to create proprietary systems that automate and link every aspect of its business processes. "This is the first back-end reengineering of the entire industry," says Kevin Czinger, Webvan's chief financial officer, a former managing director at Goldman, Sachs & Co. Gone are the scores of stock person-



orders: His 330,000-square-foot distribution center in Oakland, Calif., can serve as many customers as 20 large supermarkets

l, warehouse employees, and cashiers
at grocery stores typically employ.

At the heart of all this reengineering is
the 330,000-square-foot distribution center
in Oakland, Calif., which services an area
of 40 square miles in any direction. This is
the prototype for the other centers that

Webvan plans to build. The \$25 million facility, which includes 4½ miles of conveyor belts and temperature-sensitive rooms to store items such as wine, cigars, and ice cream, can serve as many customers as 20 supermarkets, which typically measure about 40,000 square feet. The difference is

that Webvan can do all this with less than half the labor and nearly double the selection of available products. Webvan eventually plans to sell about 50,000 items, including 300 varieties of fresh fruit, 750 kinds of cheese, 500 types of cereal, and 700 cuts of fresh meat and fish, including

live lobsters. A typical grocery store carries an average of 30,000 items.

Of course, replicating this system worldwide will be no easy feat, which is why Webvan announced on July 9 that it has enlisted the services of Bechtel Group. The construction giant will be responsible for building Webvan's distribution centers and delivery infrastructure in 26 new markets over the next two years. The cost: more than \$1 billion.

Despite the hefty investment, Webvan

that something will go wrong are impossibly high. Moreover, the massive capital investment required to roll out Webvan in big areas—from Washington, D.C., to Chicago to Los Angeles—makes the prospect of imminent profitability dim. "We want to keep our investment down to get into the 40 markets with 400,000-plus households," says rival Peapod's CEO Andrew B. Parkinson, who spends about \$2 million per warehouse vs. Webvan's \$25 million. "If you don't keep your invest-

average conventional supermarket bring about \$12 million in annual revenue.

How can Webvan do it? For start high-tech tracking systems monitor or from the moment they are placed on company's Web site. Workers know pickers are stationed throughout the distribution center to assemble orders in pl boxes known as totes, which are colored depending on whether items are refrigerated, frozen, or dry. But instead traipsing down endless aisles, the picker travel no more than 19½ feet in any one direction to reach 8,000 bins of goods that brought to the picker on rotating carousel. "When 85% to 90% of a person's time [in a traditional store] is spent traveling to locate and assemble orders, you realize why it makes sense," says Gary Dahl, formerly a senior executive at American Stores Co. now Webvan's vice-president for whole. "You want to keep people stationary and you can keep them busy."

Once a picker has finished with a task, the tote is then transported via conveyor belt to other areas of the facility housing different items. After an order has made the rounds, it is loaded on trucks refrigerated at 35F that take it to one of 12 docking stations through-

Skeptics say there are so many details to nail down that Webvan will almost certainly go wrong

estimates that it will spend less than 1% of its revenue on bricks and mortar when all is said and done, while conventional stores must spend an average of 6%. The result, says Webvan, is at least a 10% increase in the industry's traditionally low operating margins. And that's why the company, unlike its online-grocer rivals, plans to pass on the savings to consumers and deliver any order above \$50 for free.

Skeptics say Webvan's promise is too good to be true. With so many nagging details to nail down, they say the odds

ment costs down, you don't have a model that can be expanded."

Borders is undaunted. He claims that each of Webvan's facilities, because of their efficiencies, will start making money within nine months of launch. Behind Borders' boast is his company's ability to assemble an average 25-item order in less than one hour. At peak performance, the company expects to bring in \$300 million in annual revenue per facility by handling more than 8,000 orders a day, involving a total of 225,000 items. The



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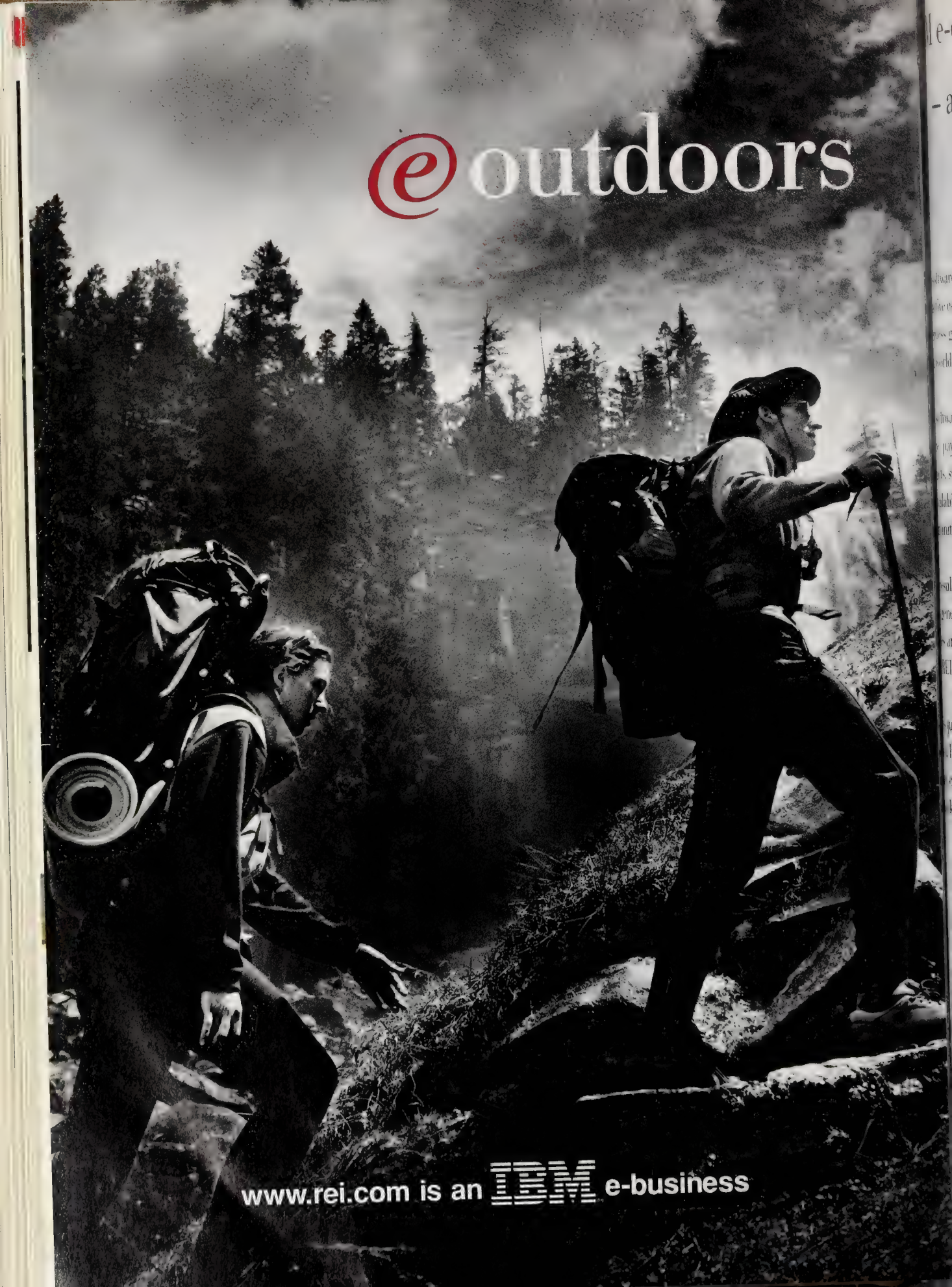
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A black and white photograph of two hikers with large backpacks ascending a rocky trail in a forest. The hiker in the foreground is on the left, leaning forward, while the hiker in the background is on the right, using a trekking pole. The background is filled with tall evergreen trees and a misty atmosphere.

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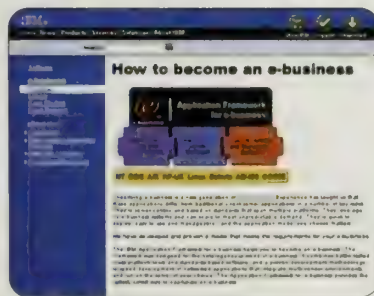
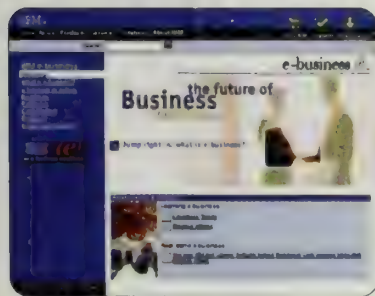
IBM e-commerce software powers the REI online store — and sales that exceed projections by over 360%. Can IBM e-commerce software help you?

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the Bay Area. From there, the totes are loaded onto one of the company's more than 60 vans so that drivers can take the orders directly to the customers' homes. None of some 70 so-called couriers travels more than 10 miles away in any direction.

tote should hold and how far trucks should drive from docking stations to customers' homes.

Of course, all this logistical wizardry can't prevent the inevitable snafus. And there have been plenty. Some examples:

The company plans to open 26 facilities in two years. Construction on No. 2 is under way in Atlanta

Borders, who pursued graduate studies in mathematics at the Massachusetts Institute of Technology, has spent many a night with his old math books calibrating such things as the 19½-foot distance between products and workers to achieve maximum productivity. "We mocked the whole thing up in a small warehouse," says Borders. "With 10 feet, we couldn't get enough inventory to the person. Thirty feet was too far to walk." He also calculated how many products each

Heartier containers had to be bought to keep soft cheeses from getting crushed. Celery didn't fit into the produce bags, so Webvan had to buy bigger ones. And some totes were tipping over while traveling around the distribution center, so weights were placed inside them to keep them upright.

AMBITIOUS PLAN. Webvan is sure to experience more such mishaps—particularly given its ultra-aggressive expansion schedule. Con-

struction on facility No. 2 is already under way in Atlanta, and the center is scheduled to open early next year. Deals are pending in other locales, both in the U.S. and abroad.

Webvan says it has to act swiftly to launch its brand and head off competitors, including Peapod and Homegrocer.com, a venture backed by Amazon.com. Webvan says that once it has achieved enough volume in each market, it can easily offer other services and products at incremental costs. Borders muses about selling books, videos, computer equipment, and consumer electronics, as well as offering dry cleaning and film processing. "We see this as a cornucopia of opportunity," he says. Either that, or Webvan is going to turn out to be the biggest disappointment the Internet has seen.

—Contributor
David Leonhardt

Webvan Service Is, Well, Promising

Personally, I have high hopes for Webvan. Really high hopes. As a working mom, the idea of ridding my life of even one trip to the grocery store sounds almost as heavenly as sleeping in on Saturday. Fat chance on the extra zzz's. So I'm banking on Webvan. The minute the upstart went live on June 2, I was there clicking away. It took me a while to figure out how to navigate through all the different food categories on the Web site. But once I got the hang of it, I found it to be pretty straightforward and logical. I've now ordered four times and the results are, well, promising.

Here's the good news: The quality of Webvan's food—from strawberries to swordfish to redleaf lettuce—is excellent.

area known as Sensations. You can get everything from basic soups and pasta to tarts made with Black Forest ham and Havarti cheese.

Perhaps more remarkable, though, is the delivery. Uniformed couriers have arrived at my doorstep each time within the 30-minute window that I chose. They've always been helpful and courteous, even unpacking my orders for me. And it hasn't cost me extra. Webvan's prices are generally no more than I'd pay at my local store—and in some cases, they're better. A box of De Cecco pasta, for instance, costs \$1.99 at my local market, while Webvan



times, I did not get items I had asked for. And one time, my raspberries came smashed. I was credited for those items, but I still ended up making trips to the store

to get them. So much for convenience. I've also had trouble getting everything on my shopping list. Webvan says it plans to carry twice as many items as a typical store. But the selection on some basic things and the variety of fresh produce and fish isn't up to snuff. For example, I couldn't find several kinds of baby food I typically buy. Nor could I get yellow and orange cherry tomatoes or salmon steaks.

I suspect—rather, I pray—that Webvan will quickly work out the kinks in its system. Already, I'm finding more selection than I did when I first logged on. If Webvan keeps this up, it will have won me over as a customer for life. If it doesn't, it's back to the grocery store.

By Linda Himmelstein

The uniformed couriers are courteous and helpful— but they don't always have the right merchandise

I've done my best to put the online service to the test by ordering loads of perishables and have been pleased each time. The prepared foods, which I have yet to try myself, sound tasty, too. They are cooked and created by Webvan's own chef, who will share the recipes in an

charges just \$1.58—a 26% savings. What's more, Webvan waives delivery fees on orders over \$50, while most of its online competitors require an order of \$75 or more.

Now for the not-so-good news. Webvan goofed on half my orders. Both



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Invasion of the E-Vikings

Nordic entrepreneurs are rushing to exploit Western Europe's Web markets

John Palmer was running an ad agency in steamy Kuala Lumpur when Asia's financial crisis erupted last year. The Australian marketing specialist promptly packed away his tropical-weight clothes and headed to a frosty zone where the economic boom is still going strong: Scandinavia's cyber frontier. Now, Palmer is living in Stockholm, where he has taken the reins of a new E-commerce buyers' co-op called Letsbuyit.com. He's launching localized versions of the

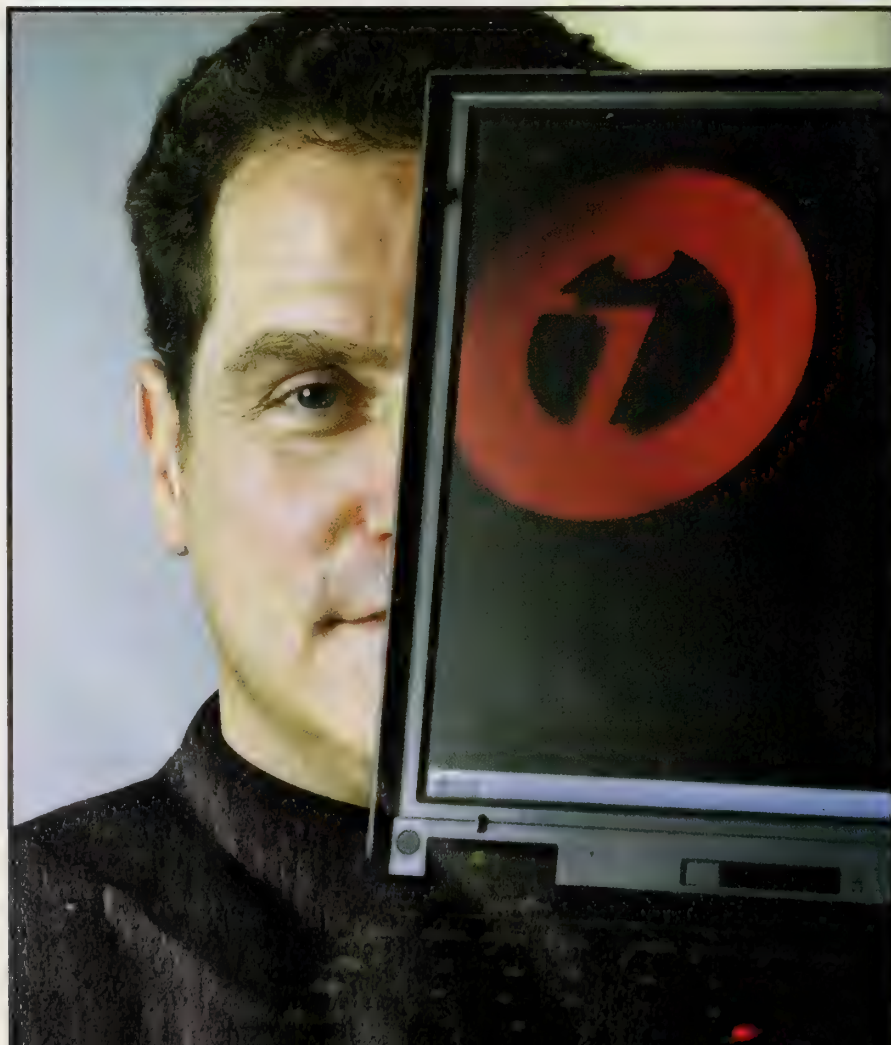
site in Denmark, Finland, and Norway. The plan is to push it into the richer German and British markets by fall. "Lots of other sites are going to be moving to Europe," he says. "We want to get there first."

It's a Nordic invasion. All of a sudden, Scandinavian Internet companies that thrived in their home countries are making aggressive plans to spread south to great, largely untapped cybermarkets in Germany, France, and Italy. Already, Sweden's Boxman is selling music CDs all across the Continent, and Finnish E-broker eQ Online is preparing to offer stock trading in Germany. The prize is a big piece of pan-European E-business, which International Data Corp. projects will grow from \$5 billion last year to \$197 billion in 2000.

The Scandinavians are betting they can quickly come up with customized products for their neighbors, putting up Web sites geared to local tastes and languages. They hope to offer multilingual and multicultural alternatives to the Web, which is dominated by the Americans and English. In the process, their efforts should spur business growth in Europe, bringing the Web far closer to fulfilling its promise as a medium for connecting all of humanity. **NO HOLIDAY.** There's no time to waste. Scandinavians already are starting to outpace American Web giants turبوpowered by fabulous stock valuations. Amazon.com Inc., the American shopping site, and the online auction pioneer eBay have both established E-commerce sites in Britain. Meanwhile, the Western Europeans, who so far haven't done much beyond starting Internet-access services, are constructing their own commerce sites of their own. So in the end, they are getting a head start that many Nordic Netrepreneurs are even skipping their normally sacrosanct month-long vacations as they race to colonize Europe.

And why would Scandinavian companies have an inside track? It's simple. Un-

Franco Fedeli, CEO of Icon Medialab, who now has 600 employees in 12 countries



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many Europeans, the Nordics are already online and have been for years. Indeed, Scandinavia boasts the highest Web-surfing population per capita in the world, with Finland, Norway, and Sweden all topping 30 Internet users per 100 adults, while the U.S. trails with 28. The Scandinavians have plenty of E-commerce expertise, too. Pioneer shopping sites like Sweden's Torget have been operating since early 1996, when Amazon was still known principally as a jungle.

In the race to win with E-commerce, the Scandinavians have another crucial advantage: world leadership in mobile telephony. If they succeed in creating winning Web applications for the phone, they'll be positioned to sell to a vast cell-phone market in Europe all operating on a single standard, something that American Web

masters can only dream of. Cell phones—in effect, pocket-sized computers—now number 115 million in Western Europe and are growing at a 50%-per-year clip. Soon, Euro Web merchants will be able to reach a continent of consumers in their pockets and purses. If the Scandinavians can master these mobile Web applications, they could be titans of the post-PC era.

For now, though, most are focusing on Internet services via the PC. And they're marketing up a storm. At this summer's

ented," says Tomas Althén, CEO at E-Group, a Swedish network company. "People know that even if the startup fails, they can always get a job somewhere else."

In their enthusiasm for startup mania, the Scandinavians aren't limiting their expansion to Europe, either. Finland's Inet Group in May opened an E-commerce Web site for the international fruit-juice industry, and plunked the headquarters in Florida. The site, eFruit International, designed to speed up everything from

Scandinavia boasts the world's highest Web-surfing population per capita and commands global leadership in mobile telephony

Glastonbury rock festival in Britain, for instance, a double-decker London bus pulled up to one side of the stage and offered the 130,000 fans a cybercafe upstairs, where they could check their E-mail and order CDs, and a "chill-out zone" below, with videos and refreshments. The sponsor of the bus was Boxman, the up-and-coming Swedish E-merchant of CDs, which is rolling into Britain and other markets with a bang. Boxman is gaining fast in the northlands, winning 5% of the total CD market in Sweden—a percentage that dwarfs Amazon's market share there in books.

Boxman is spending heavily on radio and billboards, even TV, to build its brand throughout Europe. Its formula, now common among Scandinavian online merchants, calls for establishing customized European sites but creating a universal brand identity. "We've got \$2 million to launch this in Britain," says Boxman U.K. Managing Director Joe Wilson. "Now is the time to brand ourselves, while the market is still relatively uncluttered."

It won't be for long. In shaded office parks in the suburbs of Helsinki and Stockholm, Web entrepreneurs are hatching Continental plans. They range from juice merchants to travel agents to a Finnish electronic brokerage that's opening a service for stock trading on mobile phones. This ferment is breeding a cultural revolution. For decades, engineers, computer scientists, and business grads coming out of the top universities filed straight into 40-year careers at Volvo, Ericsson, Electrolux, and Nokia. Now they're detouring into startups. "We used to be very safety-ori-

ange-pulp purchasing to quality control of concord grapes.

To be sure, Scandinavia is still a cry from Silicon Valley when it comes to funding Web businesses. Unlike American investors, who focus on market share and dazzling possibilities, hard-headed Scandinavians have until recently judged ventures by traditional cash-flow and revenue standards. "It's been much easier to finance for a steel mill than an E-business," says Johan Stael von Holstein, a leading Web entrepreneur in Sweden. That has left Web startups in the cold. Languished as unfunded idea for three years before funding arrived—\$13 million from back in Germany and the United States.

HEATING UP. Now, that's changing. Finland's first Web initial public offering, Nedico, a Web designer, was eight times oversubscribed when it went public this spring. Today, global investors are prowling Europe's Weblands—with a focus on Scandinavia. In the last month alone, French giants Vivendi and LVMH Moët Hennessey, Louis Vuitton, Britain's News Corp., and Japan's Softbank all announced multi-hundred-million dollar Internet venture funds for Europe. Meanwhile, U.S. ventures firms such as Vision Capital and Apex Partners are making the rounds in Stockholm and Helsinki. "I expect things are going to heat up in the next year," says William R. Caldwell, managing director of Equitec Partners in Helsinki, the representative for U.S. investment banker BancBoston Robert Stephens Inc.

If Scandinavia has been slow to embrace bankroll startups, it's because the indus-

WILL SCANDINAVIA'S WEB STARTUPS COLONIZE EUROPE?

BOXMAN:

This two-year-old Swedish company is Europe's leading online music seller. Now, it's moving into local markets in France, Germany, and Britain with customized Web sites.

EQ ONLINE:

Finnish online brokerage is spreading into Germany—and setting up a system for stock trades over mobile phones.

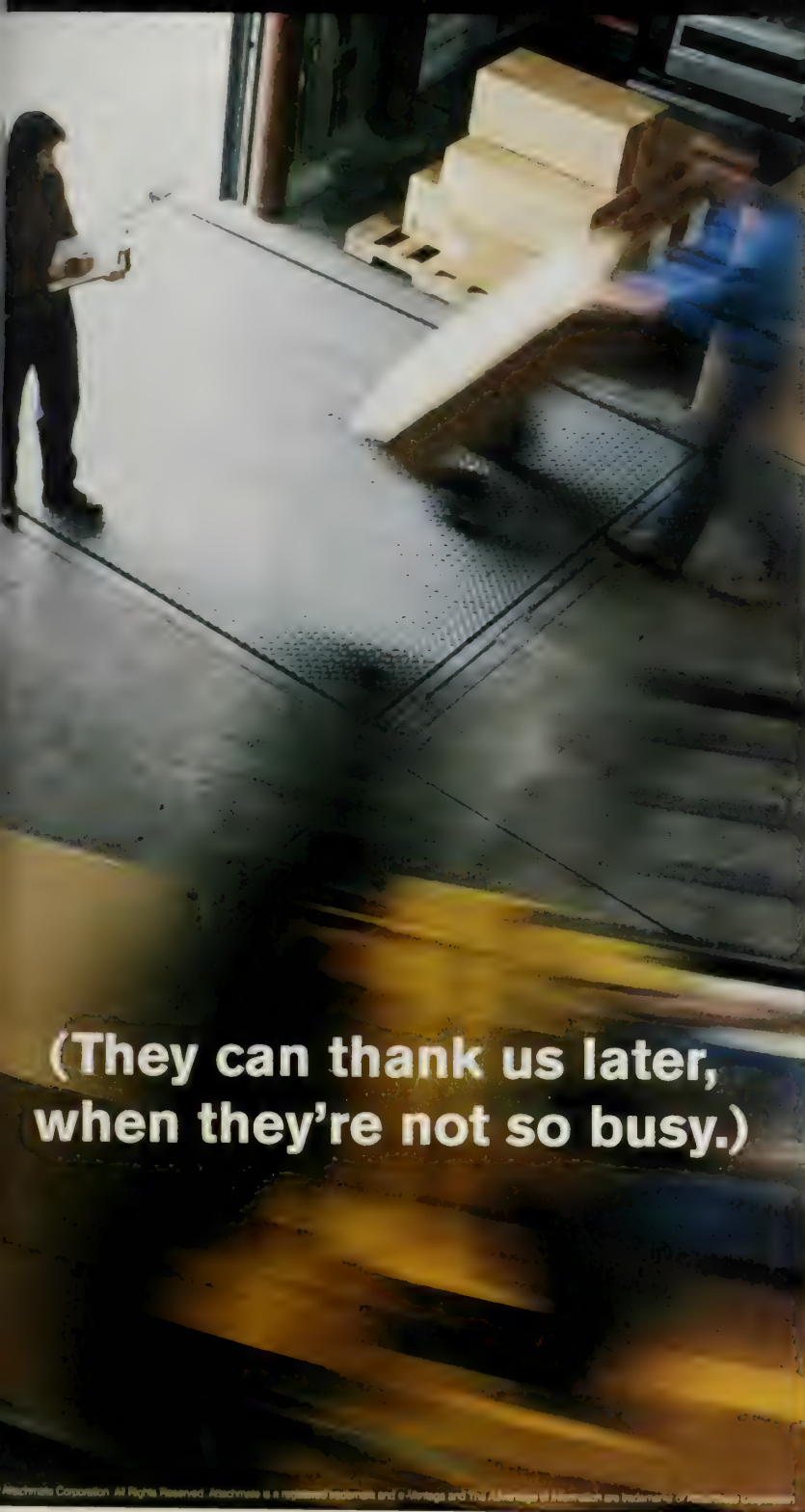
ICON MEDIALAB:

Europe's largest Web designer, the Stockholm-based company has opened offices in 12 countries, including France and Italy, and is helping put European giants like Alcatel and L'Oreal online.

LETSBUYIT.COM:

Swedish E-merchant pulls together consumers to create buying leverage—and then negotiates low prices from manufacturers. It plans on expanding to other countries in the coming months.

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largely without them. In Sweden, for example, the trailblazer on the Web was none other than the post office. In 1995, postal officials realized that the Web was the key to revolutionize their business—whether with or without them. They jumped aboard, creating Torget. The reasoning: it would direct the flood of pack-

Web sites are using the clout of a large customer list to haggle down manufacturers' prices

that resulted from E-commerce went right to the postal service.

That kind of success got the attention of Scandinavian entrepreneurs. For instance, Stael von Holstein, a Swede who works as a banker in Luxembourg, quit his job in 1996 and moved home to set up a business. The result was

Medialab, a Web page designer and consultant. Working with CEO Franco Berni, Stael von Holstein set a pattern for expansion. Icon opened offices in neighboring countries and proceeded south. Now with \$24 million in annual sales, has 600 employees in 12 countries and puts together Web pages for leading European companies, from L'Oréal. Equally important, Icon's European network serves as a staging ground for other Scandinavian E-businesses, such as Letsbuyit.com, as they spread outward. "With us, they don't need to reinvent the wheel in 12 countries," says von Holstein.

In each country, though, there's the potential for a potent marketing message. In the Scandinavians feel confident they'll be able to play the right chords. Letsbuyit.com, for instance, is using itself in Scandinavian advertisements as an antidote to traditional capitalism—with consumers taking power from producers. This is an appeal in Scandinavia, with its long list traditions. The Web site surveys consumers to learn their buying preferences—and then uses the clout of a large

customer list to haggle down manufacturers' prices.

Now it's time for Letsbuyit.com to expand. CEO Palmer plans to spend the \$13 million raised in a private placement to build up the brand in a hurry. First, he needs to spread to more populous countries to build up a customer

base. And he's also anxious to move into Western Europe before the arrival of rich cyberpowers from America.

To date, though, big American brands are barely established on the Continent. America Online Inc. has taken a bruising from free Internet providers in Britain and

remain one step ahead of their American rivals. Web phones are one way to do that. 10 Online, a Helsinki company that went online a year ago, offers standard brokerage services on PCs. But the company is preparing a similar service for mobile phones, with a German-language version for export. CEO Petri Rutanen says his company's plans coincide with the development of Internet-surfing smart phones at nearby phone giants Nokia and Ericsson, which should be hitting the market in Europe later this summer. Already, the region's phone titans are pouring money into software startups focused on cell-phone E-commerce. Ericsson ventured to Iceland to invest \$13 million last month into software developer Oz.com, whose iPulse product allows people to



Postal pioneer: In 1995, Sweden's postal officials recognized the Web's importance and created the Torget system to route packages from their E-commerce site directly to the postal service.

from a host of national ISPs run by large phone companies. Amazon.com has set up a successful branch in Britain but has yet to dent the book markets outside of the English language. And eBay Inc., while opening a site in Britain, is still a foreigner to the rest of Europe.

The Scandinavians must move fast to

communicate via phone, computer, pager, or mobile phones with small screens.

If E-commerce ever fulfills its promise of putting a mall into everyone's pocket, the Scandinavians may be selling the gadgets—and running the E-commerce sites as well.

—Contributing: Ariane Sains in Stockholm

Everybody into the Pool

PETER ELSTROM

Venture capital is drawing cash from everywhere—thanks to amazing returns

Sure, Martha Stewart is the person to go to for the perfect pistachio shortbread recipe. Now, she's a resource for something else: venture capital. In April, the fashion doyenne, along with venture firm Sudbury Group and other investors, agreed to plunk down \$37.5 million to remake the

Fragrance Counter Web site into a portal for health and beauty supplies. Stewart will sit on the board of what's now called ibeauty.com. "The goal is to make it the Amazon.com of the prestige cosmetics, fragrance, and skin-care category," says Dr. Samuel Waksal, the head of the Sudbury Group, who organized the investment group.

Former 49er Lott

With the Internet booming, a flood of new investors are rushing into the venture-capital game. They're being lured by quick riches, the chance of a strategic edge for their companies, or just a piece of the Internet action. There are sports stars like former San Francisco 49er safety Ronnie Lott and Detroit Pistons guard Joe Dumars. There's Hollywood director and DreamWorks SKG co-founder Steven Spielberg and LVMH Moët Hennessy Louis Vuitton Chairman and Chief Executive Bernard Arnault. Tech consulting firms like KPMG Peat Marwick and Andersen Consulting talked themselves around possible conflicts of interest so they could turn their inside knowledge into investments. "Everybody wants a play in the venture business," says Geoffrey Y. Yang, a partner at Menlo Park (Calif.)-based venture firm Institutional Venture Partners.

A key draw is a potential return just this side of winning the lottery. Benchmark Capital's original investment of \$6.5 million into online auction company eBay Inc., for

example, has increased more than five hundredfold, to \$3.4 billion. Yang says IVP's funds have been averaging returns of 75% to 90% in recent years. Even the new investors are striking it rich. Renowned architect Charles Gwathmey poured \$100,000 into Global Crossing Ltd., the telecom upstart laying cables under the world's oceans, for a stake now worth more than \$10 million. Spielberg put what sources close to the director say was \$5.5 million into the online city guide CitySearch. That's worth almost \$18 million in what's now Ticketmaster Online-CitySearch.

Such stories are attracting oodles of cash. Venture-capital firms raised \$12.5 billion in 1998, more than double the \$6.2 billion of 1995, according to VentureOne Corp. Easily the largest slice of the money raised last year is the \$7.8 billion targeted for information-technology investments. And VentureOne's numbers don't track another growing pool of capital—money available from "angels," or individual investors willing to finance promising startups.

"There is dramatically more venture-capital money coming into the

LVMH CEO Arnault

business than ever before," says James W. Breyer, managing partner of Accel Partners, a Palo Alto (Calif.) venture-capital firm.

Don't expect to see a slowdown, even though there has been a slight cooling off in



THE NEW VENTURE CAPITALISTS FOR THE NEW ECONOMY

ATHLETES:

Ronnie Lott and Harris Barton, two former San Francisco 49er football players, are raising \$30 million from other athletes so they can cash in on the tech boom. Joe Dumars, the former Detroit Pistons star, has signed on as a special limited partner at Invescare Partners, backer of medsite.com, where doctors can buy supplies and swap information.

FASHIONISTAS:

Bernard Arnault, the chairman of LVMH Moët Hennessy Louis Vuitton, has become one of the most aggressive European investors in E-commerce. Fashion doyenne Martha Stewart and a group of investors are spending \$37.5 million to build Fragrance Counter into a health and beauty portal.

INSIDERS:

This year, KPMG Peat Marwick has made venture investments averaging \$10 million in six companies, including software developer Active Software Inc. and Net solutions provider Silknet. Its typical deal: Backing companies whose technologies KPMG sells to its customers. Andersen Consulting also is using its insider role to invest in promising upstarts, such as Web-software maker ChannelPoint.

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Market Snapshot

Dow Jones Industrial Average

▲ DJIA	9,147.57	+45.09
▲ S&P 500	1,115.65	+10.42
▼ NASDAQ	1,864.81	+10.25

Industry Insight

Week of July 13

Get direct access to current industry highlights.

Focus on...

Textiles Industry (non-apparel) Go >>

Who did Schwab consult to re-think its online investing environment?

- From #20 to #3 on Gomez Advisors Internet Broker Scorecard in one year
- Named "Website of the Year" by Financial NetNews for two years running
- A website with over \$10.4 billion in securities trade orders each week
- One of the largest electronic commerce businesses

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technology initial public offerings. The first-day increase in the price of tech IPOs dropped to an average of 53% in May and June from 110% in the first four months of the year, according to Securities Data Co. But few experts think that's enough to stop the venture-capital newbies.

Consider Ronnie Lott, arguably the hardest-hitting safety ever to play football. He and 49er teammate Harris Barton are raising \$30 million, largely from other professional athletes. Rather than invest the money themselves, the pair will turn the dough over to top-tier VC firms, including Accel

An influx of new financiers is helping to get more technology investments done, faster than ever

and the Mayfield Fund. While Lott would not comment because the fund is on the verge of closing a round of investment, in the past he has said that he wants to help athletes avoid making bad deals.

Another venture newcomer, Arnault, has a lot more driving him than making a quick buck. After seeing many U.S. retailers get caught flat-footed by Amazon.com Inc. and other Net upstarts, Arnault wants to have a stake in Internet commerce and use the lessons from the cutting edge to protect his luxury goods business. "This is a fundamental change," he says. "Every area of commerce will be affected by E-retail."

Arnault has become one of the most aggressive European investors in E-business, putting about \$300 million into 25 Net companies in the past year. He has taken stakes in free Net access provider LibertySurf, Web bank E*Loan, and European auction sites icollector.com and Britain's QXL. He's far from done: On June 30, he unveiled a \$516 million investment fund called Europ@Web to back European Net companies.

STRONG BONDS. Even high-tech consulting firms are getting into the act. KPMG Peat Marwick started putting cash into upstart companies for the first time this year and has so far invested an average of \$1 million in six companies, including software developer Active Software Inc. and Net-solutions provider Silknet. Since the firm's consulting practice is constantly looking for the best technology for its clients, its partners figured they had a better-than-average perspective on which companies were going to be successful. "It helps forge a strong relation-

ship" with companies whose products KPMG is selling, says Rod McGeary, vice-chairman of the firm's consulting practice. Andersen Consulting makes similar investments to strengthen relationships with hot startups and to help good technology come to market faster.

Of course, there's a potential conflict of interest. As consultants, KPMG and Andersen are supposed to pick out the best technology for their clients. In many cases, KPMG and Andersen will sell technology to their customers that comes from companies in which the consulting firms have a financial

stake. KPMG says there's nothing to worry about: "We're picking these companies because they're best of breed," says McGeary.

Andersen's response is a bit different. The firm says its partners can pick whatever technology they want for their clients—even if an Andersen-backed firm sells a similar product. "Our commitment to our clients is that we will give them the best possible solution," says John Kun-

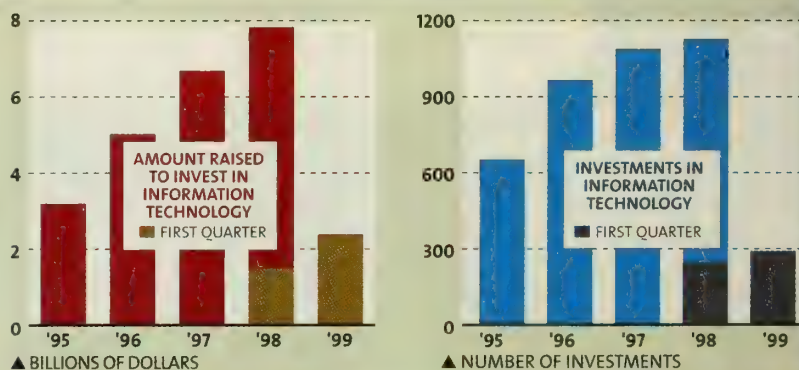
zweiler, an Andersen Consulting partner.

So what effect is the influx of new financiers having on the venture-capital business? There's no question that more technology investments are getting done faster than ever before. VentureOne says that there were 291 venture-capital deals in information technology in the first quarter vs. 238 in the same period in 1998. That money has supercharged the build-out of Internet players. "There's a very significant land grab," says Accel's Breyer.

Still, all the frenzy around venture capital is making some industry veterans a bit nervous. They worry that the arrival of fashion designers, sports stars, and Hollywood directors could signal trouble ahead. "When there is this much interest, I'm willing to bet we're near a market top," says Breyer.

Some are more blunt: "There's more money chasing fewer deals than I've seen in the last 10 or 15 years," says Terrence Elkes, the former chairman of Viacom's Internet unit who now does venture investing through firm Apollo Management LP. Ronnie Lott and Harris, are you sure this is the time to turn your buddies up for money? ●

A HOT GROWTH BUSINESS: VENTURE CAPITAL



DATA: VENTUREONE CORP.

BIG MONEY GRABBERS

The largest VC investments in the first quarter

NAME	AMOUNT (IN MILLIONS)	DESCRIPTION
WIT CAPITAL	\$72.0	Provides investment banking and brokerage services over the Net
JUNO ONLINE SERVICES	\$65.0	Offers free E-mail and sells Internet access
NORTHPOINT COMMUNICATIONS	\$63.6	Supplies high-speed data connections for small and mid-size businesses

DATA: VENTUREONE CORP.



The wah-wah pedal that had some rockin' effects on a family business.

A punk band in São Paulo, Brazil, takes a break from rehearsal. Frustrated with the band's sound, the drummer walks over to his laptop. He boots up. He logs on. He points. He clicks. He smiles. He rejoins the band. The bassist and the lead guitarist turn to him and ask what he was doing. He replies, "Eu acabo de comprar algo para melhorar nossa seção de guitarra." Loosely translated: I just bought something to improve our guitar section.

Nothing sounds sweeter to the online musical instrument shop Norwalk Music, than an order all the way from Brazil.

Of course, things weren't exactly jumpin' and jivin' when Mike Spremulli, Jr. first set up Norwalk Music online.



For one thing no one knew their site existed. For another, Norwalk, Connecticut, isn't exactly a music mecca. So with the Web doing what it is (way bigger than Connecticut), and with the big boss (his dad) looking over his shoulder, Mike Jr. had to do something to drum up business.

How MSN LinkExchange can help you tune into a global marketplace.

Mike Jr. sought out the services of MSN® LinkExchange.® Quite simply, he wanted to make sure that if someone was looking for a musical instrument, Norwalkmusic.com could be found. So he used MSN LinkExchange's Submit It! to register with dozens of the big search engines. Now, any aspiring rock star with Web access can locate them. And this traffic is turning into orders. A bloke from Down Under has a clarinet to his liking. A coffee-shop crooner in Italy has a new set of guitar strings. A Michigan marching band can get fully outfitted in less time than it takes the majorette to catch her baton.

Drum roll, please.

What has Mike's online venture meant to Norwalk Music? Increased sales to the sweet sounds of 26%. If he were in a band, his family would be screaming for an encore.

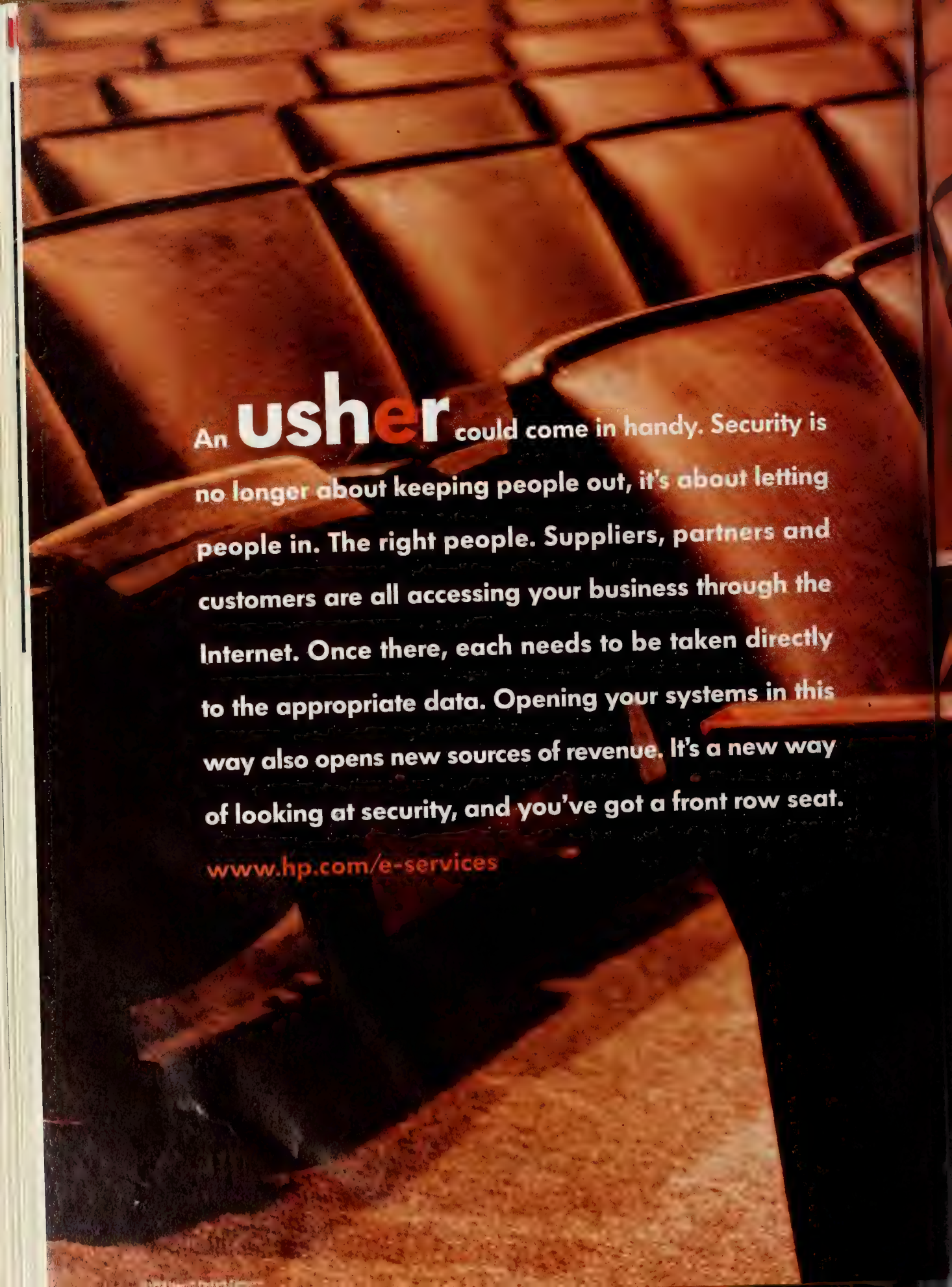
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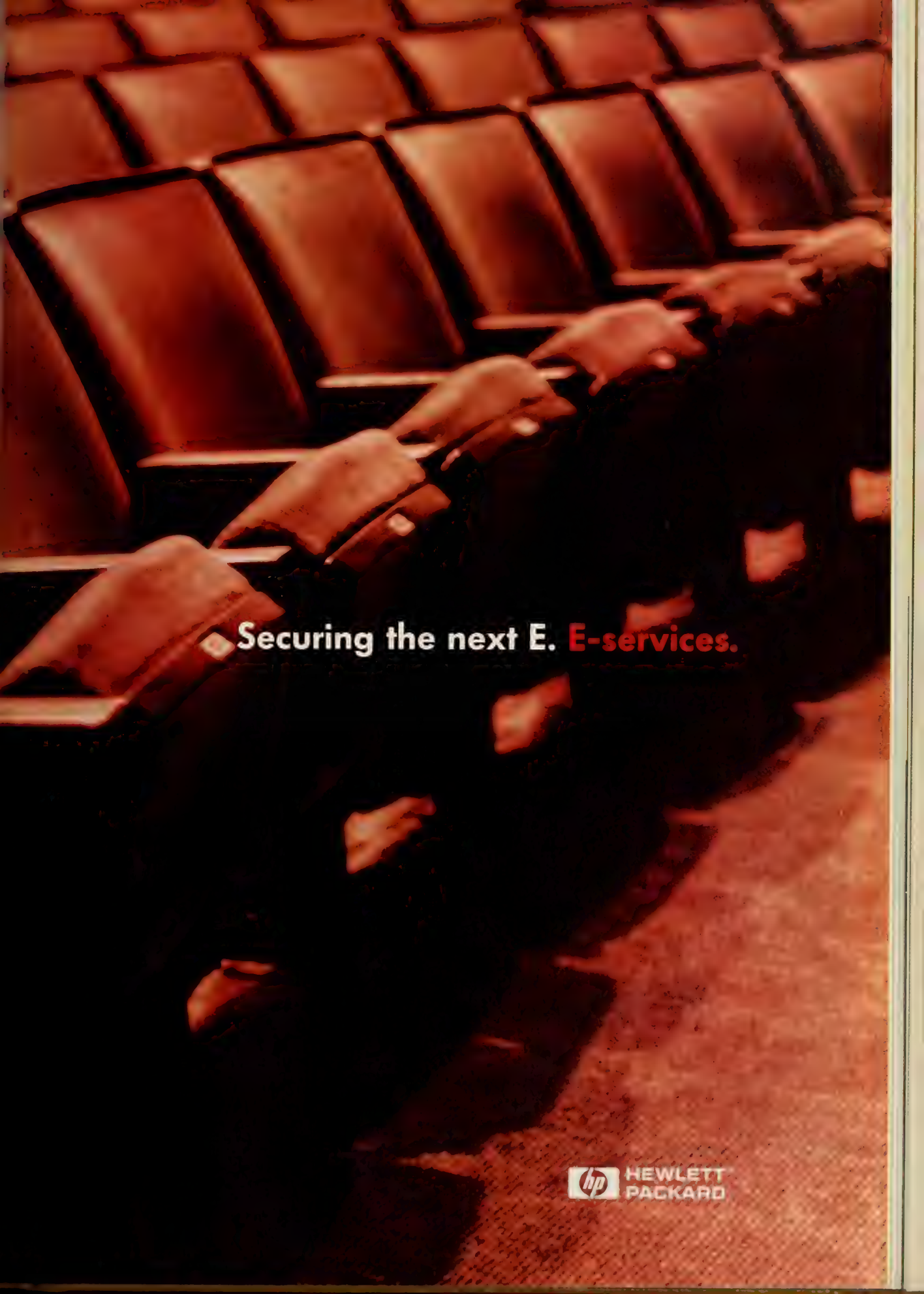
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Lemonade Stands on Electric Avenue

DAVID LEONHART

Net sales booths sell everything from staplers to pet products

You won't find many shops on Main Street that sell strictly refrigerator magnets. The items are cheap, and demand for them is rarely strong enough to justify renting an entire storefront. They're the ultimate in a niche business. On the Internet, however, none of that matters.

Just ask Chris Gwynn of Quincy, Mass. His two-year-old online magnet store, Fridge-door.com, which he started as a part-time gig, has allowed him to quit a well-paying job and focus exclusively on his startup.

The Web is spawning a world of just such virtual lemonade stands—home-based businesses that hawk everything from staplers to accessories for Jack Russell terriers.

Thanks to the Net's global reach, these tiny sales booths can appeal to a highly dispersed group of customers—and prosper. Gwynn is making 200 to 400 sales a week: Austin Powers and Scooby-Doo! are hot right now. "An inch wide and a mile deep," says Gwynn, who was formerly an analyst at Yankee Group Research Inc. "That's what I'm going after."

If 1998 was the year that mainstream Corporate America discovered E-commerce, 1999 may well be the year that all the Tom Dicks, and Harriets with dreams of being their own bosses hang out a shingle in cyberspace. "There are a lot of people who have a passion," says Bo Peabody, founder of Tripod, an online community hosting the home pages of 3.7 million members. "Now they're turning that passion into a business."

And they're doing it in droves. Around 30,000 small businesses—outfits with annual revenues of less than \$10 million—now take orders over the Web, according to Keenan Vision Inc., a San Francisco consulting firm. That's up from just 200 companies in 1996—and should grow to 400,000 by 2003. Already, some 3 million more people make a living from home than was the case in 1995, according to International Data Corp. And experts believe many of them soon will start selling via the Web.

It all adds up to one of the few big exceptions to the massive consolidation trend of the past decade. Large numbers of people who have full-time jobs can experiment with E-commerce businesses on the side, boosting their income or living out a fantasy. A subset of them will even quit their day jobs. "This is a fundamental transformation," says Steve Westly, vice-president for marketing at auction site eBay Inc.

Perhaps—but these lemonade stands face huge questions of sustainability. At all, some of the nation's biggest sellers of goods—from supermarkets to Wal-Mart Stores to Sears Roebuck—have barely begun to dabble in E-commerce. When they go whole hog, a lot of small-time Web merchants could find their niches swallowed up. The pressure is on them to establish a position now and become big enough to fend off competition.

It's surprisingly easy to get started. Y



Wendy Gem Davis, an Alabama mother of five, makes up to \$5,000 a month with her online collectibles business. The extra income helped her family move to a bigger house.



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don't need to keep any inventory—or even sell your own products. The least sophisticated way that people are adding to their income is by becoming “affiliates” of larger businesses, such as the Amazon.com Inc. shopping site. Its 260,000 affiliates position an Amazon banner or button on their home pages. When a visitor clicks on the link and buys something from Amazon, the affiliate gets a cut ranging from 5% to 15%.

The key to being a successful affiliate is offering content so compelling that Web surfers not only flock to your site but also click through it to buy related products. In Britain, David Campion has built a Web site that includes the lyrics to every Nirvana song, a time line on the grunge band, speculation on lead singer Kurt Cobain's suicide—and a link via an affiliate button to CDNow. He makes a 7% commission or more on every CD sale that originates from his site.

Alison Yoshikawa, however, can tell you what happens when your Web site has little to do with the affiliate link. The business-products broker, selling mainly electrical and janitorial supplies to companies near her Northern California home, has increased sales three- or fourfold by putting her business on the Net. But she hasn't made a

eBay to see if she could buy any porcelain figurines for her collection. When she saw all the buying and selling going on, she realized it could be the perfect way to supplement her husband's salary without leaving her kids. “I felt like I could do this,” Davis says, “and it just started taking off.”

She has gone from trading figurines to selling clothing her kids had grown out of to driving to the nearby Walt Disney discount outlet and stocking up on cut-rate goods. She then marks them up—usually by 100%—and sells them to people as far away as Australia and Kuwait. She brings in a profit between \$1,000 and \$5,000 a month, and the extra income has allowed her family to move to a bigger house.

Now, the Internet community sites plan on making it even easier for small fry to get a flying start. Later this year, HyperMart Inc. will launch a service allowing Netrepreneurs to sell goods over the Web without building their own security or electronic shopping carts. They'll simply pay \$100 or so a month and link up with HyperMart's technology.

Major Internet companies also are lending a helping hand, hoping to build their own traffic in the process. They're enabling merchants to set up a store from scratch in

Jagemann quickly refocused on her established stationers set up E-business.

And that's the rub. While it's true there are enormous opportunities for entrepreneurs on the Web, they can disappear quickly. Flexibility is the watchword. Otherwise, mom-and-pop shops can be left with little more than a bitter taste in their mouths.

— Contributing: David

HELP FOR MOM-AND-POP E-SHOPS

What Internet companies are doing to help the small fry set up their virtual lemonade stands

LYCOS

On July 12, the No. 2 portal announced that it would allow members of its Tripod community to link online auctions to their home pages—the first such program.

HYPERMART

The largest community of small businesses—some 360,000—will add full E-commerce capability later this year. That means Mom-and-Pop shops won't have to build their own security or electronic shopping carts.

SHOPNOW.COM

The E-commerce company has created a massive online catalog and a warehouse of products, called MyShopNow.com, allowing individuals to create ministores without having to worry about inventory or shipping. Individuals get a 5% cut of any sales made off of their sites.

EBAY

Starting in July, sellers and buyers using the eBay online auction site will be able to get updates on their offers and bids via Skytel pagers. Later this year, the same service via telephone.

Some people are starting online businesses by becoming affiliates of sites such as Amazon.com

single cent off of the link to barnesandnoble.com that her 25-year-old daughter installed on the Web site 10 months ago. After all, how many people who are ordering a mop are inclined to buy a copy of *The Iliad* at the same time?

Another way to join the game is by selling goods on one of the big auction sites, such as eBay and Amazon. While most of the people who sell items at auctions are trying to clear out their attics, others are making real businesses out of it. Indeed, eBay says more than 10,000 people now make all or a big chunk of their salary through its site alone.

One of them is Wendy Gem Davis, a 30-year-old Alabamian with five children, including 5-year-old quadruplets. About 2½ years ago, she logged onto then-obscure

a few days, with almost no technical savvy and for about \$500 in startup costs and \$150 to \$350 per month after that. Web portal Lycos Inc., for example, just connected its members' Web sites to its auction listings. That enables merchants to present much more information about a product than they could on the auction site itself—and still show real-time updates on the bidding.

That's a boon to people like Davis. But it can't shield her if one day Disney decides to start selling its outlet goods online and leaves her without a niche. “These small, scrappy folks can do well,” says Tim Brady, vice-president for production at the Yahoo! Inc. portal. “But it's also very easy on the Internet for Wal-Mart to see what's popular and why someone's doing well.”

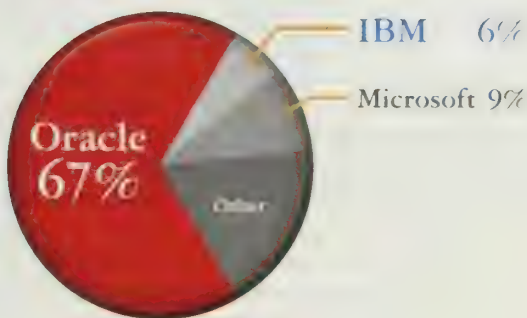
That's what happened to Paula Jagemann, a part-time executive assistant who last year set up a Web site to sell office supplies. Things start well enough, but then Staples and Office Depot got into the act.

ONLINE LINK

A company closeup of HyperMart Inc. will be available on July 20 on ebiz.businessweek.com.

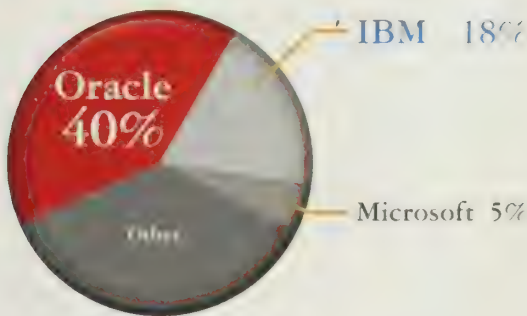
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Taking in the Travel Sites

TIMOTHY J. MULLAIN

How good are the top three online agents at helping plan a trip?

It is summer in New York and on company time here I sit planning my vacation. According to scads of surveys that cross my desk, I'm not the only one—some 80% of surfing is done at work. And it's that time of year. But unlike you, fellow cubicle rats, I don't need that boss-is-coming backup plan—that one-click

way to put something that looks like work on my computer screen. This is a review of the top three travel sites on the Web: Microsoft Expedia, Travelocity, and Preview Travel. So—get this—I am working. (At least, that's my story and I'm sticking to it.) I spent 10 luxurious hours surfing travel sites where the average visit is just seven minutes. Now I'm here to tell you wage slaves all about it. Some days, I like this job very much.

Naturally, there is a deadly serious purpose to all of this worktime goofing off: to size up the state of one of the Internet's most popular pastimes. Preview, Travelocity, and Expedia are among the Net's 44 most-visited sites, attracting audiences between 3.7 million and 3.9 million people monthly, according to Media Metrix. Are these the best travel sites? Depends on who you ask. We picked them for a simple reason: They're the ones people use the most.

BEST OF TEST. Of the group, I like Preview. It manages the best balance between the three reasons a good commercial Web site exists: content, community, and commerce. I also found it the best-looking and easiest to use. The Web is moving toward weaving the three C's together tightly, because Web merchants think content and community will move goods. But it also makes for a logical, coherent experience for the user. It simply makes sense to have travel informa-

tion as close as possible to where you can do something about it, and to match it up with chat, bulletin boards, and the other cornerstones of online communities. Preview's balance of the three C's is far from perfect, but it's the least wobbly of the three.

With that standard in mind, I crafted a way to test the sites: I planned three different trips. One was a theater weekend in New York at a good hotel, another a long October weekend in Montreal, and the third a week-long 10th-anniversary trip to London in the fall. The good news for my wife—and for at-work slackers everywhere—is that I booked one of them. (Which one? I did this on the company's time, not the company's tab).

The bad news is that all three sites flunked basic ele-

ments of what people should be able to insist on from a well-rounded Web site. None of the three could get me to Montreal the way I wanted to go—by Amtrak. And they are too packed with press releases to provide objective, high-quality content. And only one of them (Expedia) even tried to do a decent job of creating a community where I can swap information with fellow travelers.

"DINGY"? Let's start with content. I want Web content to do three basic things: to entertain, and inspire trust. And in the two areas at least, Preview had the edge. All of the sites offer city-by-city content about popular destinations, but Preview's alliance with Fodor's Travel Publications lets it consistently serve up the best-written copy of the bunch. Like a good vacation, Fodor's four-paragraph introductory dining in New York is enough to make you buy a ticket. Travelocity was second, thanks to content from Frommer's.

Microsoft has its own writers, but their work can be iffy. Right around the corner from my office is Br

way, and every night I walk the bus through through thrilled-to-be-here tourists. Expedia, New York's theater district is "a small (and unfortunately dingy) section of the city." Hey, no one knows better than I the smell of Eighth Avenue on a hot summer morn, but the out-towners seem to like it—Times Square has changed little in the past few years. (It's been in all the papers.) Plus, Microsoft takes too seriously the idea that Web writing has to be terse. With all the bullet points, Travel writing is supposed



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be fun, not software code by another name.

All three sites share one serious content flaw: Their "news" sections rely too much on the latest press releases on fare sales. This speaks to a trend sure to hamper the Net sooner or later: It's hard to trust what you read on the Web because everyone has a commercial motive. If you only publish what the industry wants you to say, it's tough to

But let's face it: People use these sites to buy tickets. So how are these sites at commerce? At what they do best, which is selling tickets, these sites are good. But they're not great.

TRAIN IN VAIN. First, none of the three could deliver my fall weekend trip to Montreal. The simple reason: None has a deal with Amtrak. One reason for the trip is the train

wanted. Like most tourists, I'll typically want a package to save money. Then both delivered packages within a few dollars of each other. Travelocity was a different story. It seemed determined to make me starve for a package by choosing an airline. So I spent uselessly 20 minutes trying to figure out how to build a package by first picking a hotel and then finding an airline. I'm on the plane for seven hours or so, yet in the end, I'm all week. Finally, I gave up. I never did a price, though I'm sure I would have had looked harder. I just got annoyed. In practically, gasp, work.

Now, it's a fair question whether judging these sites by the right criteria. I don't doubt Travelocity President Jones when he says focus groups tell them they want price, price, and more price. I don't care about content or community. Certainly the market cap of Priceline Inc., which lets you try to "name your price" for travel and offers no content at all, gives 15 billion ways to argue that the C integration is bunk. But that's to the Net. Not tomorrow's. ●

The sites can book a New York hotel room. But theater tickets? Forget it

stay relevant enough to keep people coming back. That's why it makes sense for a Travelocity or a Preview to dish up tough coverage of air safety or carry-on luggage rules along with the restaurant reviews—something they just don't do.

The natural complement to content is community, which ought to work especially well on travel sites because people love to tell vacation stories. But Expedia is the only one of these sites that really plays the community game. I went to its United Kingdom bulletin board and asked for advice on where to go in the English countryside. Within 24 hours, I had two E-mails from Expedia members about their trips and three postings to the board. It was genuinely useful stuff. And it's unavailable on Preview (which has customer reviews for hotels) and Travelocity.

ride through upstate New York's fall foliage. Holding hands. Romance, en route to a city where French is spoken. If I want to fly, no problem. If I want to reserve a concierge-level room at a Renaissance hotel, all three sites delivered the same room for about the same price. But no train.

In New York, the same issues kept nagging. Preview served up a suite with a king-size bed and a Central Park view at the St. Moritz for \$190 a night. Expedia quoted \$240 for an economy room. But neither could sell me theater tickets. Again, I have to do half the work myself. Isn't the whole point of surfing at the office to ditch work?

The trip to London showed me which sites are easy to use and which aren't. Bad news, Travelocity. Both Expedia and Preview let me start by choosing the hotel I

ONLINE LINK

An interview with James McQuivey of Forrester Research and a profile of Preview Travel is available on July 27 at ebiz.businessweek.com.

OUR WEB REVIEWS

The Web's top travel sites are changing the game on travel agencies. But they still are concentrated more on what the industry needs to sell than on what consumers need.

PREVIEW
www.previewtravel.com

MICROSOFT
EXPEDIA
www.expedia.msn.com

TRAVELOCITY
www.travelocity.com

Content

Preview is the clear leader, thanks to an alliance with Fodor's. Expedia takes too seriously the lesson that Web writing should be terse and bullet-pointed, delivering copy that is a tad too dry.



Community

Expedia's chat rooms provide access to fellow travelers' war stories and Expedia-researched answers to specific questions. Competitors forget people love to talk about trips.



Commerce

All are more convenient than a trip to the travel agent, and deliver an impressive range of offerings. But they had annoying gaps, such as the inability to get Amtrak tickets.



Ease of Use

Microsoft's Expedia type is so small, it's reason enough to click the more inviting Preview. On Travelocity, I couldn't readily duplicate a London package deal I assembled on the other two.



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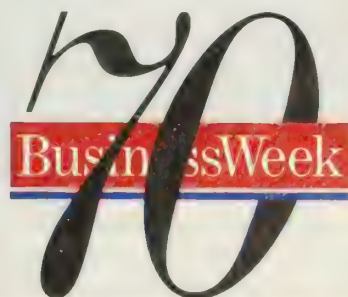
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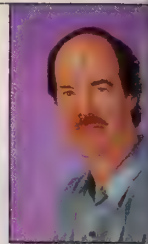
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A History of Looking Ahead





A New Race of Giants?

The pioneers of E-commerce could wind up dominating their markets

Almost since its start, the Internet has been a great democratizing force, and Internet commerce is no exception. Just a little over four years ago, Amazon.com, eBay, and Yahoo! didn't even exist. Now worth a combined \$1 billion, they're threatening to topple commercial and media giants. The message: The little guy has a chance once again. Get on the V

first with a compelling proposition, and the sky's the limit.

But this same get-big-fast opportunity may soon create big—no, make that really big—companies. Indeed, that potential dominance is why investors are betting so much on the leading Web companies. So it's a fair question to ask: Will the Net, which threw open the doors to new competition, wind up ushering in a new era of megamonopolies? Go ahead and laugh. After all, E-commerce is still a mere fraction of overall commercial activity, and competition is so fierce that a dozen companies compete in every segment. The biggest E-merchants, such as Amazon and eBay, are duking it out the old-fashioned way—by doing a great job, offering real value, and attacking inefficiencies.

But there's a funny thing about those inefficiencies that the Net will wipe out. Traditionally, inefficiencies in cost and price structure have provided an umbrella for new competition, says Jeanne G. Terrile, a first vice-president at Merrill Lynch & Co., in a recent report on E-commerce. No more umbrella means no more room for rivals to get a toehold.

That could prove all the more true thanks to a rapidly emerging new class of Net middlemen in a wide range of consumer and industrial markets. Online, with few limitations of time and geography, these new marketmakers can quickly generate a virtuous loop of buyers and sellers, whose very presence attracts yet more buyers and sellers. For that reason, they're expected to dominate many industries, from chemical supplies to rolled steel. Analyst Charles H. Finnie of investment banker Volpe Brown Whelan predicts these companies, such as Chemdex Corp. and e-Steel, have an opportunity to build a "near-monopoly position."

Just look at the online auction house eBay. Despite scads of competition and glaring glitches in service, eBay retains more than

80% market share, according to Dain Rauscher Wessels, simply because buyers and sellers want to be where the action is. Says McKelvey & Co. principal and Internet business author John Hagel III: "If you thought Microsoft was a monopoly, just wait."

CONSUMER ADVOCATES. And maybe not for long. Consolidation is already underway. Consider Amazon.com Inc.: After two years jousting with Barnes & Noble's online book site, it's still out in front by sales by a factor of eight—a beachhead that helped it grab the lead in music after its first three months selling CDs. Flush with investment capital, Amazon.com keeps buying all or parts of companies, from Home Grocer.com to Pets.com. Once players such as Amazon.com achieve a dominant position, what is to stop them from raising prices?

It may be too early to write off the Net's power to bring big guys to their knees—even big E-merchants. So one else with a radical new idea can come in and suddenly redefine a market. Besides, the Net gives buyers unprecedented power, because they get much more information about products and, with little trouble, go online to become buying forces. That's why Hagel thinks these new middlemen could well turn the tables and become customer advocates, putting pressure on suppliers for lower prices.

Maybe so. My big worry is that, pricing aside, these Wal-Mart Stores on steroids could stifle competition—which is the only reliable way of ensuring con-

tinued innovation. Years ago, policymakers and industry leaders badly punted an opportunity to keep Microsoft from becoming a near-monopoly. This time, I hope they think hard about what to do about E-commerce before it's too late. It would be tragic if the Web's biggest successes ended up stifling the very wide-open opportunity that made it such a revolutionary force. ●



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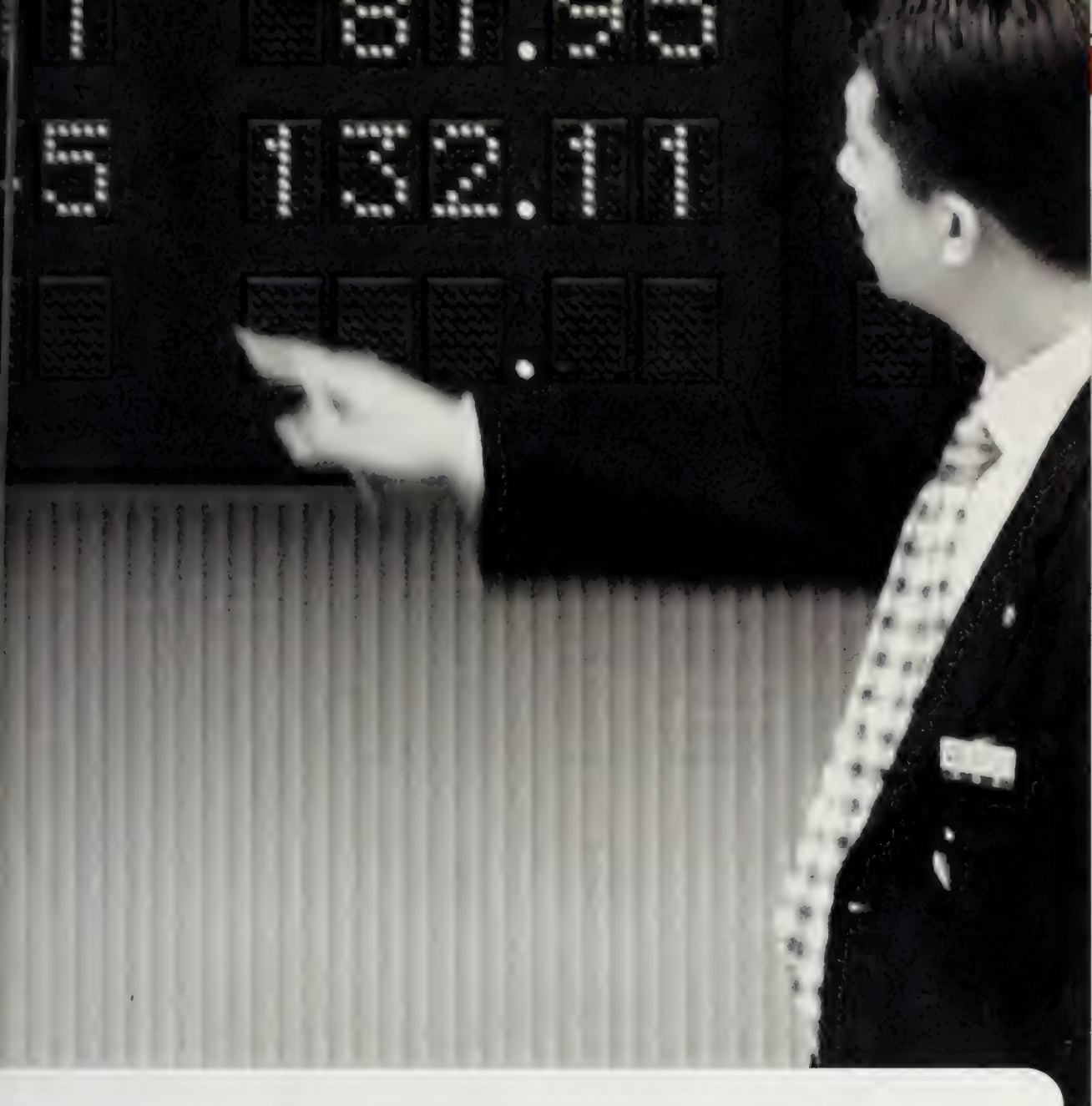
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WHAT'S THE EDGE?

EDITED BY CATHERINE ARNST



SE CHIPS WIRED M WITHIN

RESISTORS GET TINIER AND, yet chips grow ever r. What gives? The chief it is wiring. Connecting those switches takes a of wires, and their com- ty is growing faster than sistors are shrinking. researchers at Hewlett- ard Laboratories and the niversity of California at Angeles are cooking up a for the chips to wire selves. They envision s that chemically assem- themselves from conduc- molecules and tiny car- nanotube wires. "On s today, the wires are not ed the way nature would —but chemistry could care of that," says HP archer Philip J. Kuekes. the July 16 issue of *Sci-*, the team uncorks its success: a so-called logic (pictured) that self-as- bled from special mole- es designed by J. Fraser dart, a UCLA chemist. To lify lab experiments, the ecules are sandwiched be- en big metal electrodes (dots on the chip). While prototype gate has mil- s of molecules, Kuekes future versions will need more than a dozen. The goal, he says, is self-as- bled nanowires. The re- could be chips 1,000 times e powerful than today's— microprocessors smaller n pinheads. *Otis Port*

SOMEDAY TOBACCO MAY SAVE LIVES, TOO

YOU MAY NOT BE ABLE TO GET blood from a stone, but you can get it from a tobacco leaf. Or at least researchers at the Energy Dept.'s Pacific Northwest National Laboratory in Richland, Wash., can. It's all a matter of tinkering with the plant's genes.

Pacific Northwest researchers have successfully transplanted the human genes for certain blood-clotting factors into tobacco plants, which were chosen because they are common and well-studied. Most clotting factors now are made from human blood plasma, but infectious diseases, such as hepatitis B and C, flu, and HIV, can be transferred in these products. The tobacco-pro-

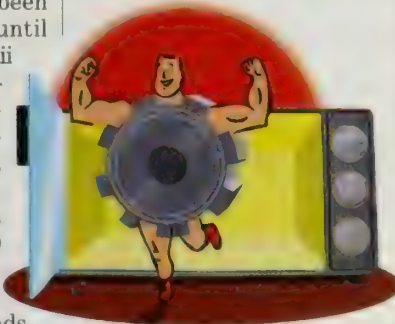
duced clotting factors, says bioprocessing group manager Daniel Anderson, are not only safer, but obtainable at about one-tenth the cost. "One and a half tobacco plants would produce enough blood factor to treat one hemophilia patient for a year, and a world supply for wound healing could be produced in a few small greenhouses," Anderson says.

So far, Pacific Northwest scientists have developed tobacco-produced coagulation factor VIII, which is used for hemophilia treatments, and thrombin, a clotting enzyme that aids in healing wounds. The blood protein is extracted from the plant leaves and then purified. No animals or humans have been tested yet, and it will likely be several years before the blood factors are available for humans, Anderson says. □

INNOVATIONS

■ For almost 15 years, scientists have been scorching graphite in the laboratory to create pure soccer-ball-shaped carbon molecules called "fullerenes." But the largest versions of these supertough structures, up to 240 atoms, have never been observed in nature—until now. University of Hawaii organic geochemist Luan Becker and two colleagues at NASA discovered giant fullerenes in a meteorite, thought to be 4.6 billion years old, that landed in Mexico 30 years ago. The discovery, reported in the July 15 issue of *Nature*, lends credence to the view that meteors may have first transported carbon—an essential element of life—to earth. In theory, these same hollow fullerene spheres could have ferried through space some of the volatile gases that make earth amenable to life. ■ Don't put metal in the microwave, right? It's a simple

household rule. But by breaking it, scientists at the University of Pennsylvania are crafting materials that display excellent mechanical properties. The team uses microwaves to heat and fuse metal powders such as iron, steel, and copper into gears, rings, and tubes that are



denser and more homogeneous than forms fashioned through normal heating processes. Such parts may soon be used in cars. But don't try this at home. Solid metals—as opposed to metal powders—do indeed cause problems in a microwave, because they reflect the microwave radiation rather than absorb it.

CAN SCIENCE KILL YOUR APPETITE?

IF YOU THINK THE URGE to overeat is all in your mind, you may be right. Researchers at the University of California at Irvine College of Medicine have discovered, in the brain, a receptor that is a major regulator of eating behavior. If a drug were developed to block that receptor, it might also block the urge to overeat, they theorize.

Reporting in the July 15 issue of *Nature*, the scientists say the receptor binds to a nervous-system chemical called melanin-concentrating hormone (MCH), known to regulate how much and how often people and animals eat. Olivier Civelli, professor of pharmacology at U.C. at Irvine and lead investigator, says previous studies have shown that removing MCH from animals causes them to be lean, while animals injected with high amounts of the hormone become obese.

The receptor for the hormone was isolated in rats lacking the MCH gene. Through a process of elimination, the scientists found the one receptor that binds to the hormone. They also found that the MCH receptors are located in the areas of the brain that control smell, taste, appetite, and feeding urges.

Civelli says a drug that blocks the receptor might be able to control overeating without causing serious side effects, because it would not interfere with other biological functions. However, he cautions that it could be 10 years or more before such a drug is available. □

MEDICINE

LYME DISEASE'S VEXING VACCINE

Critics worry that the vaccine may have serious side effects

For the past 20 years, the tick-borne bacterium that causes Lyme disease has been a thorn in the side of medical science. While doctors are locked in bitter debate over how to diagnose and treat the ailment, researchers estimate that as many as 200,000 Americans are infected each year.

When a vaccine went on sale earlier this year, it looked as if Lyme's terrible legacy might be ending. More than 850,000 doses later—at \$49 per dose to doctors—Smith-Kline Beecham Pharmaceutical's LYMERix is causing as much confusion as celebration. Some doctors worry that the much-publicized vaccine may induce serious arthritis and other Lyme-like reactions in a significant minority of users. Others fret that they'll have an even tougher time detecting the disease in patients who take the vaccine, which SmithKline says is at least 78% effective after three shots.

The controversy is just the latest twist in a baffling disease. In the current *Journal of the American Medical Assn.*, researchers note that accuracy varies substantially among the 53 tests for Lyme that are approved by the Food & Drug Administration. "To reduce this risk of misdiagnosis, it is important that clinicians understand the perfor-



ADVOCATE: Vijay Sikand is studying LYMERix for kids

mance characteristics and limitations of these tests," the authors warn.

The need for better testing and treatment for this public health scourge grows more imperative each year. Lyme disease was not identified until 1975, when doctors saw a rash of cases in Lyme, Conn. They realized the infection, caused by the *Borrelia burgdorferi* bacterium, was spread by deer ticks. Connecticut now has the highest incidence, followed by Rhode Island and New York, according to the Centers for

Disease Control & Prevention. But disease has been reported in 48 states.

Infection is thought to occur most often when people are bitten during tick's nymph stage, when it's no larger than a pinhead and particularly hard to detect. Some people develop a slowly expanding bull's-eye rash near the bite, often suffering fatigue, fever, headache, muscle aches, and joint pain as well. About 20% don't have any symptoms for months. While most patients recover after a 28-day course of antibiotics, Lyme can sometimes lead to severe arthritis,

facial palsy, neurological problems, brain inflammation, and heart problems, all of which can persist years after the initial infection.

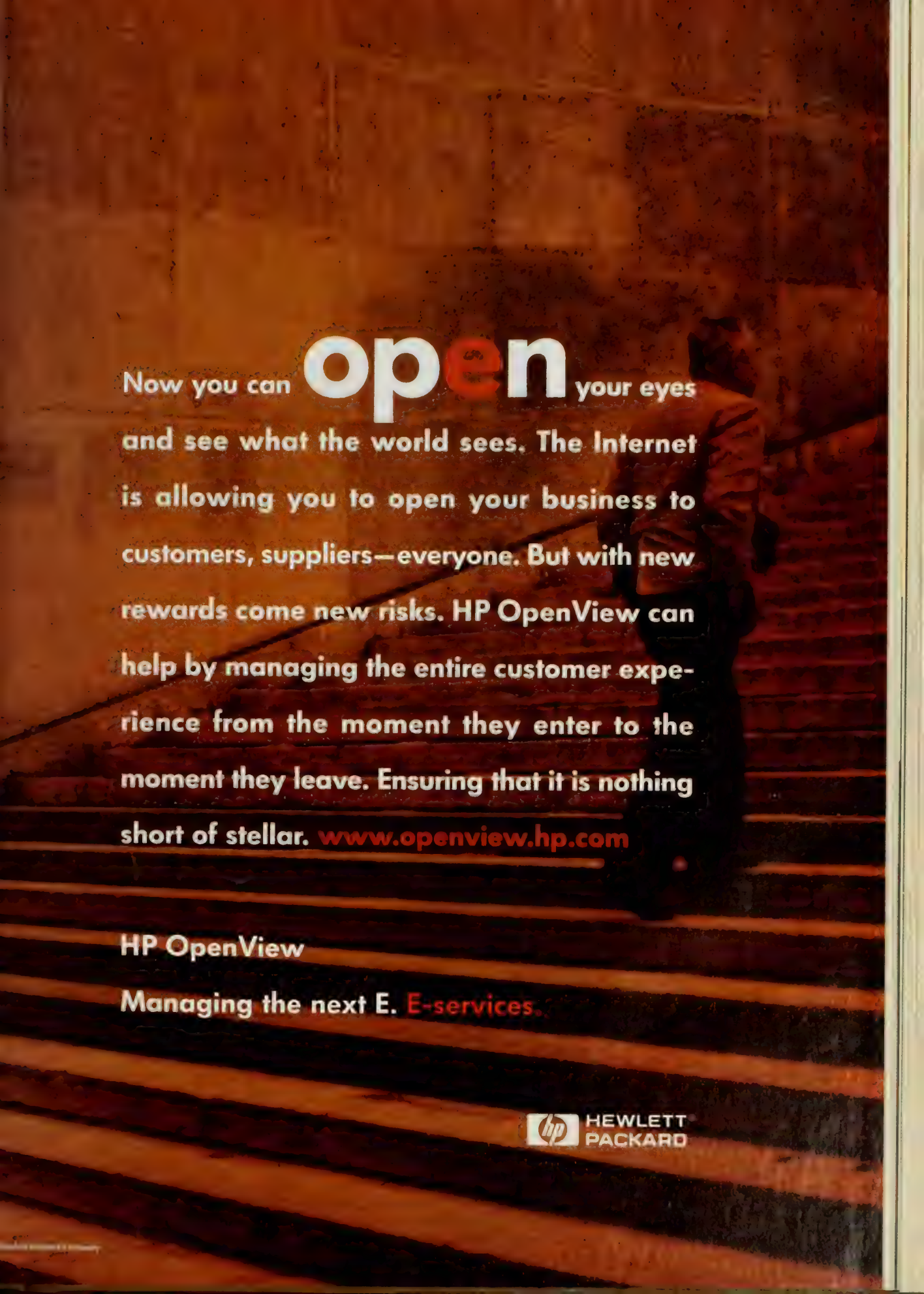
Jody L. Ring of Greenwich, Conn., is exhibit A for the problems surrounding treatment. When she became infected several years ago, doctors diagnosed symptoms as depression and chronic fatigue syndrome. For years and a dozen doctors later, Ring was finally tested and treated for Lyme disease. She went through intravenous and long-term antibiotic treatment after the standard four-week drug course failed to work. Ring says she looked into taking LYMERix, which is recommended for existing sufferers to avoid infection, but decided against it after several doctors told her they "wouldn't even take it themselves or vaccinate people with it" because not enough is known about possible complications.

ONLY THEORY? The uncertainty arises from the potential side effects that could afflict patients who aren't properly screened. About 20% to 30% of the population carries a gene called HLA-DR4. When infected with Lyme disease, these patients are more likely to develop treatment-resistant arthritis and other chronic symptoms. Because the vaccine triggers an immune response against the Lyme bacterium, it might set off those same symptoms in patients with the HLA-DR4 gene.

SmithKline executives insist that such worries are more theory than reality.



SCOURGE The tick-borne ailment continues to stymie doctors, who are concerned by a lack of reliable diagnostic tests and a controversial vaccine



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ity. "We've looked through the data and found nothing," says David M. Stout, SmithKline Beecham's president for North America. Of the 5,469 adults who received the vaccine in clinical trials, investigators say, the number who developed arthritic complaints was similar to that of the placebo group. But the trials excluded people with joint-swelling diseases, immune deficiencies, certain heart problems, and chronic Lyme-related symptoms, in case their conditions confused the outcome. Little is known about the vaccine's effect on those groups.

An advisory committee did end up recommending that the FDA approve the vaccine, but the committee voiced concerns about long-term safety. "I would hold off on vaccinating anybody with an ongoing clinical illness," says Robert T. Schoen, clinical professor of medicine at Yale University and a committee member who voted for approval. "Given that this is a new vaccine, it will do best if we are thoughtful about using it."

BETTER TESTS. Still, few would dispute that a vaccine is crucial. Vijay K. Sikand, a co-investigator in the LYMERIX study, blames the controversy on a lack of understanding. While adverse reactions are "theoretically possible," he says, "they haven't happened yet." More importantly, says Sikand, initial studies show the vaccine to be at least 78% effective against initial infections and 100% effective against the severe symptoms that might show up years later. He notes that LYMERIX appears to be even more effective at the same dose in children and that new studies advocate a two- to six-month immunization schedule for adults.

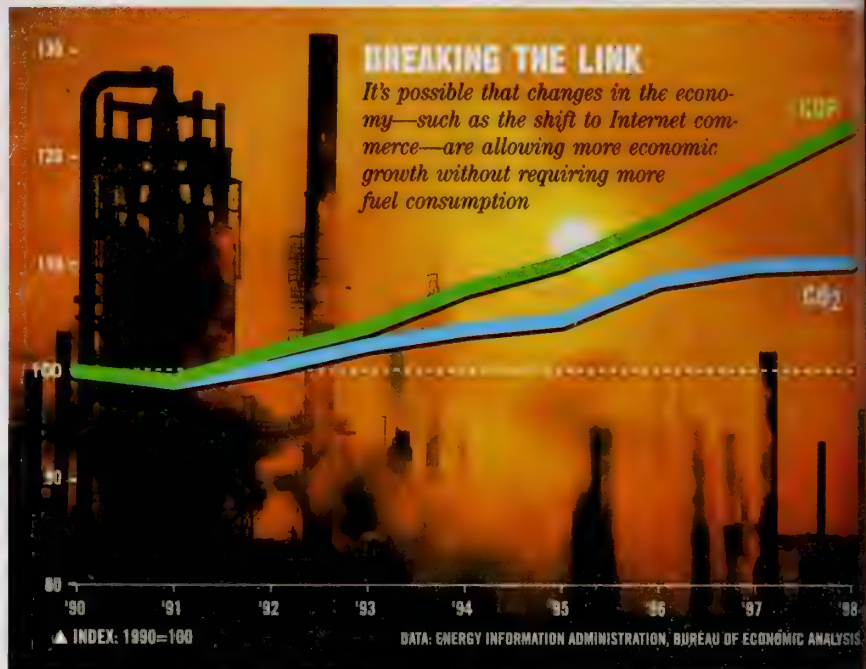
Pasteur Mérieux Connaught USA of Swiftwater, Penn., says a vaccine that it is now developing could be even better. It claims its vaccine, called Imu-Lyme, is 92% effective. The vaccine has not yet been approved.

At the moment, the best advice may be to simply mirror the clinical trials for LYMERIX. Healthy adults between 15 and 70 who have no history of arthritis or immune problems might decide a vaccination is critical if they live in high-risk areas—and if they are screened for the HLA-DR4 gene. But Karen Vanderhoof-Forschner, who chairs the Lyme Disease Foundation in Hartford, says the larger issue is the lack of a good diagnostic test.

Currently, the Lyme test cannot be administered until four to six weeks after a person is bitten—and, as JAMA reported, even then the disease can be hard to detect. "Without a good test, how do you prove the vaccine works?" asks Vanderhoof-Forschner. "We need to stop the name-calling and work on the basic science." Until then, danger will continue to lurk in the backyard.

By Diane Brady in Greenwich, Conn.

Environment



FOSSIL FUELS

CRACKS IN THE GREENHOUSE?

Reduced emissions and growth may be compatible after all

Since 1990, U.S. emissions of carbon dioxide have risen and fallen with the nation's economic output. Emissions last dropped when energy demand fell during the recession of 1991, and since then they have grown an average of nearly 2% each year, as the booming economy demanded greater use of fossil fuels. The burning of fossil fuels is the primary source of carbon dioxide, the most important of the so-called greenhouse gases, which can trap the sun's heat and lead to global warming. And the U.S. belches out 23% of the world's emission total.

During the 1990s, this link between prosperity and growing fuel use led many to conclude that efforts to limit CO₂ emissions—to forestall global warming—would stifle economic growth.

Now, however, it seems the connection between economic growth and carbon dioxide emissions is not so strong. The Energy Information Administration, the Energy Dept. agency respon-

sible for analysis and forecasting, found that 1998 emissions of carbon dioxide were only 0.4% above 1997 levels. The near-flattening of emissions growth occurred even as the economy grew at a roaring 3.9% and as oil prices hit a year low.

"It isn't really clear what causes things to flatten out the way they do,"

says Eileen Claussen, former Assistant Secretary of State for Ocean & International Environmental & Scientific Affairs who is now executive director of the Pew Center on Global Climate Change,

Carbon dioxide output rose just a tad in booming '98

Washington think tank. It's too soon to tell whether the drop in emissions growth was a one-time event or the beginning of a trend, Claussen says.

Last year was unusual: The El Niño current produced a warm winter, leading to a drop in the use of fossil fuels for heating. Manufacturing disruptions brought on by the Asian economic crisis also led to a drop in energy use.

It's also possible, however, that

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Environment

changes in the economy—such as shifts to knowledge-based services and the explosive growth of the Internet—are allowing more economic growth without more fuel consumption. All the Energy Information Administration can say is that consumption of coal, oil, and natural gas was down last year. (Its carbon dioxide emissions estimates are computed from figures on energy use.)

The U.N. Intergovernmental Panel on Climate Change has concluded that the earth's temperatures could rise by 2F to 6F by 2100, depending partly upon how fast carbon dioxide levels rise. Environmentalists have urged that emissions be cut now to head off the dire effects of such a temperature rise, which include the disruption of agriculture, al-

limit its emissions of all greenhouse gases, during the period 2008 to 2012 to an average of 7% below 1990 levels. But ratification has been stalled, with fears that the costs of such emission reductions will be too steep.

STRATEGIC REDUCTIONS. Exxon Corp., one of the Kyoto agreement's most vocal critics, has said that meeting the treaty's emission-reduction guidelines would require energy price hikes that would cost each American family \$2,000 per year. But last year's figures show that emissions can fall without higher energy prices, says Former Assistant Energy Secretary Joseph J. Romm. In a new book called *Cool Companies: How the Best Businesses Boost Profits and Productivity by Cutting Greenhouse*



JUST A FLUKE?

"It isn't really clear what caused [carbon dioxide emissions] to flatten out the way they did."

—Eileen Claussen, Executive Director
Pew Center on Global Climate Change

teration of weather patterns, and a rise in sea level that could flood coastal populations around the world. Some industry advocates have objected, fearing that cuts in emissions could hamper economic growth.

Patrick J. Michaels, a climatologist at the conservative Cato Institute, believes last year's drop in the emissions curve was a fluke. "*El Niño* flattened it!" he insists. He is confident that rapid emissions growth will return with colder temperatures.

"DOWNWARD TRAJECTORY." Not so, says Howard Geller, director of the American Council for an Energy-Efficient Economy, a nonprofit conservation group. He argues that the weather wouldn't have affected industrial emissions—and they dropped 1.2% in 1998. Instead, Geller points to a recent drop in U.S. "energy intensity"—the amount of energy it takes to produce a dollar of gross domestic product. "We've been on a downward trajectory over the last few years," Geller says, and it is finally starting to show up in the emissions figures.

Geller and other environmentalists are hoping these figures will help change the national debate on climate change policy. The Kyoto Protocol, an international agreement drawn up in December, 1997, requires the U.S. to

Emissions, Romm describes dozens of companies that have prospered by reducing emissions. "Global climate change is making carbon mitigation a strategic corporate investment," he says. He predicts that annual reductions in energy intensity of 5% will become commonplace by the 2008 to 2012 period.

"More and more companies are moving quickly on this issue," agrees F. Tebo, vice-president for safety, health and environment at DuPont Co. Since 1990, the chemicals giant has invested \$100 million in greenhouse-gas abatement projects to achieve a 45% reduction in emissions by 2000.

It's no surprise that companies are cutting their emissions, says David Becker, director of the Sierra Club's Global Warming & Energy Program. In most cases, Becker says, "cutting energy consumption is cheaper than free-

For the time being, the Clinton administration remains cautious about the implications of the new emissions figures. A senior State Dept. official calls the report "a one-year snapshot" that won't be enough to change international perceptions of U.S. emissions trends. But even a snapshot seems to be enough to start a thousand arguments on this most contentious of environmental issues.

By Evelyn L. Wright in New York



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MARRIOTT'S NEW VIEW OF DOWNTOWN

It's putting rooms for road warriors in inner cities



Recently, J.W. "Bill" Marriott Jr. paid an inaugural visit to one of his newest properties, a Courtyard Hotel in downtown Washington. As he stepped from his limo, the imperturbable chairman and CEO of Marriott International Inc. eyed a group of men loitering around his grand property, still fresh from a \$25 million renovation. What he didn't take in was the rest of the block—a ramshackle row of shops and a nightclub with bulletproof glass. How much does he know about the neighborhood? "As much as I want to," Marriott says without a smile.

In fact, Marriott no doubt knows this downbeat stretch of F Street better than he's letting on. So why did the nation's leading hotel chain place one of its most highly regarded brands—Courtyard, a

The push into not-yet-gentrified neighborhoods is risky: Will it erode the consistency that has built Marriott into the strongest hotel brand?

CEO MARRIOTT AT HIS RENOVATED COURTYARD HOTEL IN WASHINGTON

394-hotel chain of no-frills rooms for road warriors—into a 108-year-old former bank building on this seedy urban strip last month? It's part of a strategy that, since February, 1998, has seen Marriott develop up-and-coming locations in about a dozen downtowns. Among the new locales: an abandoned molasses factory in New Orleans, a former plumbing-company headquarters in Omaha, and a converted City Hall annex in Philadelphia.

The idea is to leverage Marriott's popular Courtyard name and take advantage of Corporate America's return to inner cities. And having saturated the suburban market, Marriott needs new territory for expansion.

Adapting Marriott's suburban hotel concept has enabled it to expand quickly in a glutted market. But the plan carries some risk. Renovating old buildings is more costly than building suburban hotels from scratch. There's also a chance that some downtown revivals will flounder, dumping multimillion-dollar investments and bruising Marriott's reputation for consistency. "You run the risk of seriously affecting the brand by putting it in less-than-sterling neighborhoods," says one hotel-industry exec.

WIDE NET. Courtyard is just one piece of a rich portfolio of Marriott brands, from luxurious Ritz-Carltons to low-end Fairfield Inns. Unlike such competitors Starwood Hotels & Resorts Worldwide and Hilton Hotels, Marriott sought early on to dominate not just one tier of the \$86 billion U.S. lodging market but all of it. And it did just that by tailoring its offerings to niche sectors while maintaining the Marriott halo.

That strategy is paying off. A rash of overbuilding has pushed down U.S. hotel-occupancy rates in recent years, around 64% in 1998. Although Marriott felt the squeeze, it lost only half a point, posting 78% average occupancy for all of its hotels. Marriott's overall operating income soared 20% in 1998, to \$1.1 billion, while revenues rose 10%, to \$1.5 billion. "Developers are flocking to the Marriott brand because they know

Marriott

the best brand out there," says Henry Kaczmarek, an analyst for American Express Financial Advisors, which holds 9.8 million Marriott shares.

Some investors see Marriott as a relative haven in a stormy sector. As profit growth slows, hotel stocks have dropped from their highs of a couple years ago. Marriott International shares are trading around \$37, up 3% from where they started in March, 1998, when

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The Corporation

the original Marriott spun off its lodging business as Marriott International and merged its food-service and facilities-management businesses into Sodexo Marriott Services Inc. That performance pales next to the 27% rise for the Standard & Poor's 500-stock index during that time, but it handily beats a 22% drop for the S&P hotel-motel index.

SIMPLE PLAN. Marriott scored one of its biggest hits in 1983 when it launched Courtyard. The concept was exceedingly simple: follow the flight of business to the 'burbs and target road-weary execs. Courtyard's boxy buildings are unremarkable, cookie-cutter designs surrounding a central pool. But there's plenty of parking for all those rental cars. Rooms have desks and data ports for laptops. Lobbies are modest, but travelers wake to a breakfast buffet.

With an \$89 average room rate last year, Courtyards go easy on corporate budgets. And because of their uniformity, they're easy to spot. Says CEO Marriott, 67: "We want people driving up the highway going: 'Oh, that's a Courtyard. I saw one in Nashville, and I know what to expect when I get there.'" The formula

works: While industrywide revenue-per-available-room was up a mere 4% in 1998, Courtyard beat that by 2 points. It did the same in '97, posting 8% room-revenue growth. Today, Courtyard makes up 18% of Marriott's overall rooms.

But the suburban market is getting crowded. Hilton launched its Garden Inn chain three years ago to compete directly with Courtyard. It's expected to have 200 units open or under construction by next year. For now, Hilton is sticking with newly built properties, says Senior Vice-President Jim Abrahamson: "We think urban is a growth vehicle, but you need to stay focused on your prototype." Other rivals are moving downtown with their own rehabs. Just across from the New Orleans Courtyard sits an Embassy Suites, converted from a sugar warehouse by Felcor Lodging Trust Inc.

To keep a step ahead, Marriott plans to add about 20% more Courtyards in cities over the next five years. The con-

verted buildings are on track with projected bookings, the company says. It hopes to expand the concept to other brands, by building extended-stay Renaissance Hotels & Resorts in city apartment buildings, for instance.

Short term, some customers may be turned off. "We do have some guests that are not fully satisfied," concedes O. E. Lambert, Courtyard's senior vice president for brand management. "People go in and say: 'Where's my parking?'" Washington's Courtyard offers only valet parking. Chas-

Adams, a Chapel Hill (N.C.) athletic director in town for a meeting of the National Federation of State High Schools, says he'd steer clear of the city. "Of all the places we go all over the country, this is the worst downtown I've seen."

Making urban sites pay off is tough work. Rebuilding downtown hotels costs 20% to 30% more than building traditional Courtyards. And renovations can be complicated. Ancient plumbing and electrical systems often are more expensive to rebuild than to build from scratch. And older buildings' layouts pose challenges. Washington General Manager Michael James was stumped when workers told him they couldn't fit two king-size beds into room 701, even though they had just done so in room 801. To get out the building's walls were inches thicker at the base, making the lower-floor rooms smaller. And its "pool" is little more than a big bathtub in the ceiling. Says James: "Believe me, we didn't want to dig a hole in the ground to build that pool, but it's a Courtyard standard to have a pool."

Getting an early jump on redevelopment requires other adjustments. Washington's city leaders have targeted the city for a facelift, but meanwhile, hotel managers have hired extra security and will steer customers away from the rough side of the block. "We will have to educate guests that this is a tough town, not to walk that way after 10 o'clock at night," says James. Brand manager Lambert says Marriott had the choice but to move fast: "The neighborhood may affect our performance in the early years, but if we were to wait until F Street was done, we couldn't afford it." As Marriott goes downtown, it's finding the rooms come with an entirely different view.

By Lorraine Woellert in Washington

Urban sites cost more to rebuild than building new hotels in the 'burbs

Marriott: Something for Everyone



LUXURY	MARRIOTT HOTELS, RESORTS, AND SUITES	The flagship brand offers full service and consistency	RATE*	\$138
	RITZ-CARLTON	For senior execs and entrepreneurs who want more personalized service		\$205
	RENAISSANCE HOTELS & RESORTS	Targets business and leisure travelers seeking special touches		\$129
	EXECUTIVE	Apartment-like digs for longer stays	NA	
MODERATE	COURTYARD	No-frills rooms with a place for the road warrior to work		\$89
	RESIDENCE INN	A high-end "home away from home," complete with modem jacks		\$99
	SPRINGHILL SUITES	Moderately priced but spacious		\$85
	TOWNEPLACE SUITES	Extended stays at a discount		\$63
BUDGET	RAMADA INT'L	Overseas rooms at penny-pinching prices	NA	
	FAIRFIELD INN	For the budget-minded business traveler		\$51

DATA: MARRIOTT INTERNATIONAL INC.

*Average daily rates for 1998

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WHEN WAL-MART FLEXES ITS CYBERMUSCLES...

Plans for a beefed-up Web site make E-tailers nervous

Everyone knows that to succeed in E-commerce, you've got to get in early, and big. Come late to the game, and you might as well pack it in. But Wal-Mart Stores Inc. is about to test that most sacred of Web rules. After three years of tinkering with its Wal-Mart.com site—and sitting back while others blazed new trails on the Internet—the discount retailing giant finally appears ready to flex some online muscle. And the betting in Silicon Valley and among shopping experts is that Wal-Mart could wind up dominating this retail neighborhood, too.

Up to now, Wal-Mart.com has remained an E-commerce midget. It ranks No. 43 among online shopping venues, according to Media Metrix, trailing such upstarts as eBay Inc. and Buy.com Inc. While Amazon.com Inc. hauled in nearly 10 million visitors in May, Wal-Mart.com welcomed only 801,000. For the year, some analysts expect Wal-Mart's Web effort to generate sales of under \$50 million vs. \$157 billion total sales for the chain.

FAMILIAR GROUND. Before the end of this year, though, Wal-Mart promises to unveil a Web site with beefed-up offerings of everything from toothpaste to apparel and consumer electronics to more closely match the breadth of its land-based stores. One sign that the discount-store giant expects a rapid ramp-up: It recently signed deals with order-processing expert Fingerhut Business Services Inc. and bookseller Books-A-Million Inc. Both know how to distribute individual orders straight to customers' homes—a far different proposition than shipping in bulk, which is Wal-Mart's expertise.

This is familiar ground for Wal-Mart. When it was preparing to break into the grocery business with its first



A Retail Giant Plays Catch-Up

	WAL-MART.COM	AMAZON.COM
TOTAL SITE VISITORS	801,000	9.9 million
PERCENT OF U.S. WEB USERS	1.3%	16%
AVG. TIME ON SITE	6 min.	14.4 min.
VISITORS WITH \$75K-PLUS INCOME	27.3%	35%

For May, 1999

DATA: MEDIA METRIX

supercenters, it studied the competition then hired wholesalers to do much of the support work. As it perfected the models, Wal-Mart absorbed that work and then steamrolled local competitors. Now it's hoping to do the same on the Web. "This process is not new for us as we begin new businesses," says Senior Vice-President Glenn L. Habern, who is leading Wal-Mart's online charge.

Wal-Mart is trying its best to play down the relaunch. But it clearly is headed for a collision with Amazon, the preeminent E-tailing brand that on July 27,

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said it will branch out from books, music, and videos into toys and consumer electronics. Wal-Mart stores already are known for those categories and the new site will stock them as it tries to stake a claim as the Web's low-priced general store. Says Chief Executive David D. Glass: "We'll pursue [online retailing] more aggressively this year because our customers and other people's customers are beginning to tell us more and more about what they really want and expect from the Internet."

ADVANTAGES. With "Wal-Mart Interactive" still under construction, execs are cautious about revealing details. But in an interview with *BUSINESS WEEK*, Habern, 54, says the site will have products from all 25 categories in a typical

Wal-Mart discount store. That's more than double the current online selection. The new site will have a richer choice of higher-priced items—such as DVD players and digital cameras—than even the stores. And the online book offering will swell from 50,000 titles to 700,000. Amazon says it has access to 4 million titles, including out-of-print books.

Don't look for groceries on Wal-Mart's site, at least for a while. But you'll be able to return products ordered via a computer to any of Wal-Mart's 2,451 U.S. discount stores. And "personalization" technology will tailor online specials to a customer's shopping habits. If you're a regular buyer of cat food, for instance, you won't see deals on dog chow.

None of this sounds revolutionary.

Repeat visitors to Amazon, after are used to getting tailored recommendations of books and CDs. So why the fuss? Wal-Mart has formidable advantages in brand recognition, buying power, and technology. And none of E-tailing leaders has the financial heft of Wal-Mart, which is expected to earn \$5.4 billion this year, up 23%.

Today, those other outfits are offering cut-rate prices—and losing money—on build market share. But tomorrow Wal-Mart makes money at the same lower prices, they may have no choice but to bleed red ink. Wal-Mart "take the tremendous volume discount that it gets and apply that to an Internet pricing model that no current future Internet company could possibly

FINDING E-COMMERCE RICHES IN THE BACK OFFICE

Back in the late 1980s and early 1990s, catalog giant Fingerhut Companies Inc. made a big mistake. Executives expected explosive growth in their core business—selling everything from baking pans to computers by catalog to lower-income households. So Fingerhut plunked down more than \$210 million to build three state-of-the-art warehouses. Sure enough, sales rose, but not nearly enough to fill the new warehouses. By 1997, more than half of Fingerhut's warehouse space was vacant.

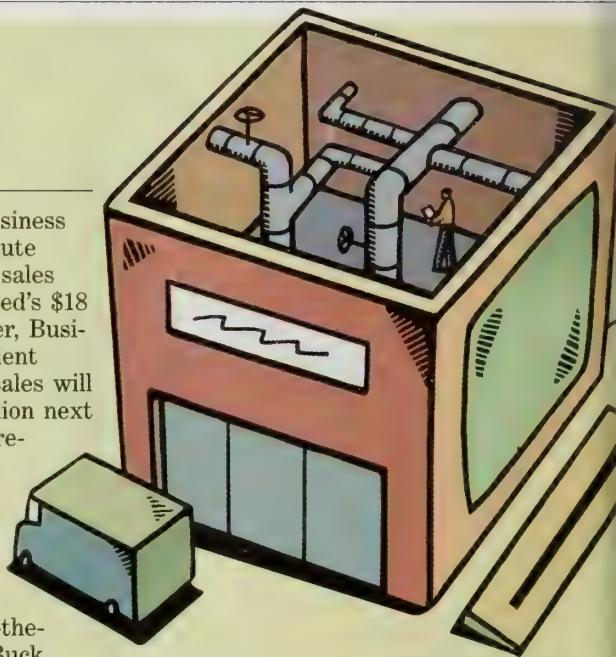
There's nothing like empty shelves to force a change in strategy. Fingerhut began promoting its back-office services such as processing orders, distributing products, and handling customer-service calls and returns as a way to lease the warehouse space. When the E-commerce boom kicked in, the new Fingerhut Business Services division was in prime position to capitalize. Today, it handles processing for 22 companies. That includes everything from startups such as eToys Inc. to giants such as Wal-Mart Stores Inc. and Levi Strauss & Co., whose warehouses are equipped to send stock to stores but not directly to customers.

The back-office business is now a small but rapidly expanding piece of Fingerhut—and one reason the company was purchased by Federated Department Stores Inc. for \$1.7 bil-

lion in February. Business Services will contribute about \$40 million in sales this year to Federated's \$18 billion total. However, Business Services President John Buck expects sales will increase to \$100 million next year. With more warehouse capacity, it could become a billion-dollar business within five years, he says. "It's just been one of those in-the-right-place-at-the-right-time things," Buck says. "But there's nothing wrong with a little luck."

INVISIBLE ROLE. Fingerhut's role is invisible to the customer buying, say, a pair of 501 jeans on the Levi.com site. With a few clicks of the mouse, shoppers send their name, address, and credit-card information, which Levi's server then sends to Fingerhut's computers. It takes 15 minutes to make sure the credit card is valid, the product is available, and the address is correct. Then Fingerhut reserves a pair of jeans at its warehouse, produces a label, and directs an employee to the right shelf. The pants are packed, labeled, and mailed. From Web site to mail carrier takes 12 to 24 hours.

But if the Web giveth, it also taketh away. Some of Fingerhut's



biggest customers, like Pier 1 and Wal-Mart, have signed contracts for only a couple of years. As these customers build expertise, they're likely to be doing those tasks in-house. The trick for Fingerhut will be to replace them with more up-and-comers such as eToys, which avoided building a \$60 million West Coast facility by using Business Services. But even eToys is already building its own facility to handle East Coast orders. And Buck admits that back-office competitors such as Federal Express could emerge. "We're not going to be in this advantageous position forever," he says. For now, though, it's a nice head start.

By Nanette Byrnes in New York, with Larry Armstrong in Los Angeles

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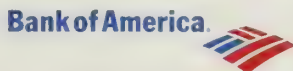
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STRAIGHT TALK ABOUT ONLINE INVESTING

There's been a lot of talk lately about online investing. About its promises and its dangers. About the freedom it gives individuals to make informed investment decisions. And about how that freedom can be just as easily used to make uninformed decisions.

Over the past two years we've pioneered online investing – today we're one of the world's largest online brokers. Our success is the result of our focus on offering high-quality, low-cost financial services to investors who make their own investment decisions. We have empowered those investors with real-time market data and financial information that previously was available only to professional investors, saving them millions of dollars in commissions in the process.

But along the way, we have never claimed that online investing is for everyone. It's not. Before you sign up with an Internet broker, you should consider carefully whether investing online is right for you. Here are a few things to think about:

Here's what we believe:

→ To invest online, you must be ready to make your own investment decisions.

→ You must take the time to learn about the fundamentals of investing. In addition to the rewards of various investment alternatives, you need to understand the risks as well. A wealth of information is now available (both online and off), but you hold the responsibility of mastering it.

→ If new to investing, you might want to self-manage only a portion of your investment portfolio. For the balance of your portfolio, consider using mutual funds, or perhaps a fee-based advisor.

→ Active investing is most appropriate for investors who can withstand a high degree of risk. Starting slowly is probably a wise decision if you are investing for the first time.

→ Don't think you need to trade actively to reap the rewards of investing online. All self-directed investors can benefit from the convenience and low cost of online trading, whether they trade once a day or once a year.

→ If you think you might be ready to trade actively, limit your trading to funds you can afford to lose. Consider dividing your portfolio into risk-adjusted segments.

→ Lastly, approach all stock tips and investment advice with a healthy dose of skepticism. Remember that good investment advice is perhaps the rarest of all commodities. Even when advice is given with the best of intentions, it may not be right for you.

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o challenge," says retail consultant P. Flickinger III of Reach Marketing. The pattern will sound familiar to any bruised Wal-Mart rivals. Demographic shift on the Web also work in Wal-Mart's favor. In-store sales to consumers should swell to \$12 billion this year to \$41 billion in 2002, says research firm Jupiter Communications LLC. Many of Wal-Mart's low- and middle-class customers may be online now, but they are likely to stay in the ranks of new users. "Internet users are increasingly coming to replace the population at large," says research analyst Kenneth R. Cassar.

WORLD STABILITY. As that happens, a name like Wal-Mart that connotes world stability may push aside Web innovators. Says Robert C. Loe, general partner of Benchmark Capital, which backs E-tailing efforts by players as Toys 'R' Us Inc. and Core PlanetRx Inc.: "The power of the brand and their supplier relationships are going to be huge advantages for them in the online world."

Will loyalty to Wal-Mart translate to Web? That will depend on price, product assortment, and service. Prices are easier to check and match on the

Many Wal-Mart shoppers aren't online now but will be soon

and one-stop shopping is less of an advantage if a specialty store with better selection is only a mouse click away. Look for Wal-Mart to leverage its massive base of stores. Besides allowing customers, it is likely to heavily promote its Web site to the 90 million customers entering its doors each week.

Amazon professes to be unfazed by the drumbeat of anticipation about Wal-Mart's plans. "There's room for thousands of successes on the Web. It's not a zero-sum game," says spokeswoman Kay Dangaard. But analysts think that in the long run only two or three broad-based retailers will thrive. Retail consultant M. Stibel, principal with the New York Consulting Group in Westport, Conn., has watched for years as Wal-Mart studied consumer behavior on the Web. "There is no company on this planet that knows more about the Internet and the way to make money through E-commerce," he says. After a slow start, the giant of Bentonville, Ark., has a good chance to show who's really in charge of the Web.

By Wendy Zellner in Dallas

Industries

AUTOMOBILES

A DIESEL IN EVERY DRIVE?

New engines spark a race for market share in Europe

Thanks to breakthroughs in fuel-injection technology, European automakers are marketing diesel-powered cars that are peppier, cleaner, quieter, and more efficient than ever. They are now one of the fastest-growing segments of Western Europe's 14-million-unit annual auto market. Their share will soar from one-quarter last year to one-third by 2003, says Peter Schmidt, editor of British newsletter *Automotive Industry Data*. The booming sales have sparked a fight for market dominance, pitting current leader Volkswagen against a rush of new entries from BMW, PSA Peugeot Citroën, Fiat, and Mercedes.

The diesel trend is born of engine envy. Volkswagen has enjoyed near-monopoly status in the European diesel car market, with its Golf TDI by far the best-seller. VW took the lead away from Mercedes-Benz and Peugeot in the early '90s, when it introduced direct-injection technology. Putting fuel and air directly into cylinders improved fuel consumption by 15%, allowing VW to charge premium prices for its cars. The Golf TDI, for example, starts at \$16,737, vs. \$14,158 for the gas-powered model.

RAIL ROADSTERS. Rivals are now fighting to get a share of those fat margins. They're doing that with the help of Fiat, which invented a new kind of fuel-injection system in 1997 called common rail. Each injector is connected to a single rail that runs the length of the engine, allowing fuel to be pumped at high pressure through shorter fuel lines into

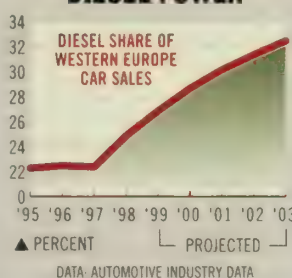
each cylinder. Combined with an electronic monitoring system that calculates the exact amount of fuel needed, this method leads to more efficient burning of fuel. Fiat, which offers the system on all of its models, has also sold a manufacturing license to German component maker Robert Bosch Group, and it now supplies several carmakers.

The result is a technology standoff that threatens VW's dominance. Customers don't care how the fuel gets into cylinders, as long as they have an affordable car that's fun to drive. Diesel has long been 30% cheaper than gasoline in Europe, where gasoline prices can top \$4 per gallon. And now even performance is no longer an issue. BMW made

VW'S LUPO
Volkswagen's lead in diesel technology is under threat



DIESEL POWER



that point in June last year, when its two-liter, four-cylinder turbo diesel won a 24-hour race in Germany.

New diesel entries are coming in all price ranges. Using the Fiat system, Audi and BMW are preparing to launch the first diesel-powered V-8 models by the end of the year, and Mercedes

will follow next year. The Audi A-8 version, due in September, will sell for an estimated \$65,800. At the lower end, the VW Lupo 3L TDI mini, priced from \$14,158, goes on sale this month.

The huge growth rates for diesels could slip in the middle of the next decade, notes Schmidt of AID, as carmakers apply improved fuel-injection technology to gas engines as well. For now, though, any European consumer with an eye on fuel costs just can't seem to resist those snappy new diesels.

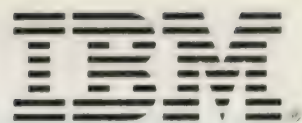
By Karen Lowry Miller in Frankfurt, with bureau reports

WHAT IF

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EUROPE

PIRACY!



How
Microsoft
cracked a
counterfeiting
ring in Europe
—and how it's
stepping up
the fight

It was a state-of-the-art plant, whose machines turned out shiny silver software disks with dizzying speed. Situated in Digital Park in a village just outside Cambridge, England, PolyMould fit right in among the computer startups and was just down the road from Microsoft Corp.'s new \$80 million research and development center. Within a few months after opening the plant in the summer of 1997, John Staud—a 37-year-old Texan—and his 25 employees were printing the world's most popular software disks, including Microsoft's Office and Windows NT, and shipping them throughout Europe.

It seemed too good to be true, and it was. Staud's plant was a pirate operation. Many of the disks he was shipping were high-quality knock-offs, costing Microsoft tens of millions of dollars in sales. The bonanza ended on a steamy summer day a year ago, when German customs authorities pounced on

a shipment from Staud's plant and seized \$60 million of pirated disks. Later, they arrested Staud. On June 15, after nearly a year behind bars awaiting trial, he was convicted of importing counterfeit software and sentenced to four years. It marked Europe's first tough sentence for a software pirate—"a breakthrough case for us," says John Frank, Microsoft's chief counsel in Europe. Staud, in a German jail, refused through his lawyer to be interviewed.

The story of Staud and his factory

them with stolen certificates of authenticity and forged user manuals.

Few would suspect that Western Europe could be such a congenial place to sell pirated ware. But the Continent's so-called gray markets are a dream come true for counterfeiters. In the outlets, from flea markets in Barcelona to trade fairs in Hannover, illegally imported goods, including pirated disks, are sold on the cheap. Even when police crack down on reselling rings, as when Spanish authorities busted 100 soft-

ware stores, counterfeiting in Europe is becoming vastly more sophisticated. It also shows how difficult it is for software makers to take down pirates. Together, Eastern and Western Europe represent the biggest market for pirated software in the world (chart, page 94)—some \$3.4 billion in lost sales annually, compared to \$3.2 billion in North America and \$2.9 billion in Asia. Increasingly, software companies suspect, organized crime groups that have been active in counterfeiting in Asia and the U.S. are setting up shop in Europe's high-tech heartland. "It's become hugely lucrative for crooks to get into this business [here]," says Allen D. Staud, European counsel for the Business Software Alliance, an industry group. Staud has been linked to organized crime in the U.S. **DREAM MARKET.** From its Lotus division to Apple Computer Inc., the entire U.S. software industry is getting hit. But most of the stolen sales, perhaps two-thirds, come out of the hide of mighty Microsoft. The new generation of counterfeiters has perfected ways to make consumer software disks nearly identical to Microsoft's own. In this underground industry, thieves, forgers, and counterfeiters coordinate to churn out shrink-wrapped products, packaging



TEXAS TRANSPLANT

PolyMould's owner received a tough sentence for importing bogus software into Germany.

JOHN STAUD



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Challenge the Limits.

vendors at Barcelona's outdoor market last year, most operators simply fold their tables and walk away.

Technology advances are making it cheaper all the time to get into counterfeiting. Investigators estimate that Staud's plant, for example, cost under \$3 million to set up—less than 5% of the retail value of its aborted truckload. Europe's tangled police jurisdictions make it easy to play hide-and-seek with money and product flowing across the region's porous borders. And over-worked law enforcement officials—intent on solving burglaries or cracking drug rings—have been slow to tackle software counterfeiting operations.

It was in 1996 that Microsoft began to notice top-notch knock-offs reaching Europe. To company officials, that was a clear sign Asian crime syndicates, which ran replication plants from California to China, were lining up partners in Europe. The European market, like the U.S., was rich with consumers ready to pay full price for certified software. More were opting for new disks, rather

than cloned copies from friends. Although this trend was beginning to drive down unlicensed sales, Microsoft was worried about sophisticated counterfeiters: If they could do a near-perfect job imitating the real thing, Europeans would wind up with fake disks, phony guarantees, and no customer service. That could devastate Microsoft's brand in its No. 2 global market.

ONE-MAN OFFICE. Microsoft turned to detective Fred Mathews and dispatched him to Europe. Then 50 years old, Mathews was a 22-year veteran of the San Diego police force. He had plenty of experience battling international crime syndicates shipping cocaine across the Mexican border. Microsoft set Mathews on the trail of Europe's software criminals. In late 1996, he opened up a one-man investigative office in Microsoft's vast complex in Reading, up the Thames from London.

The California detective started by reading transcripts of the few piracy cases already tried in European courts. He quickly came upon a case in Bel-

gium that involved a Luxembourg company—Soft Logistics—owned by Staud. The company had printed manuals for small-time software counterfeiter. Staud told police that he was distributor and thought his customer was a licensed producer. The argument satisfied German police. But, as Mathews testified in Staud's recent trial in Germany, seemed likely to me that Mr. Staud was more involved than originally appeared.

Mathews had little trouble locating Staud's British house. The address—Harvey Goodwin Gardens—was a middle-class neighborhood in Cambridge. He learned from police records that Staud was a Texan who came to England in the mid-'80s and managed to build up high-tech companies. Belgian records showed Staud had a business in England. But Mathews couldn't find it. Staud, recently remarried, was spending most of his time in Luxembourg.

Months later, poring over business directories online, Mathews came upon a list of businesses in Staud's name. He could locate most of them, but there was

On the Trail of Software Piracy

DATA: BUSINESS WEEK



POLYMOULD: Staud's British factory

The Investigation

OCTOBER, 1996 Concerned about growing software piracy in Europe, Microsoft hires former San Diego police officer and money-laundering investigator Fred Mathews.

AUGUST, 1997 Mathews discovers a state-of-the-art software replication plant near Cambridge, England. He tracks the ownership of the plant to John Staud, a 37-year-old Texan with a home and bank accounts in Luxembourg. Cambridge police decline to take part in the investigation.

The Raid

JULY 27, 1998 Mathews learns from a source that the Cambridge plant is planning a large shipment of pirated software to Germany. A few days later, it leaves Britain, despite Mathews' calls to police to stop it.

JULY 31 At Mathews' request, customs officials in Germany seize the truck with \$60 million in counterfeit software.

SAME AFTERNOON Receiving a call that the shipment is in trouble, Staud drives to Germany—and is arrested.

MIDNIGHT After Cambridge police refuse to raid the plant, Mathews obtains a civil search warrant and launches a raid with Microsoft lawyers.



CONFISCATED: Bogus copies of Microsoft Office 97

The Aftermath

JUNE 15, 1999 Staud is found guilty, following a one-month trial, of importing pirated software into Germany. He is sentenced to four years in jail—by far Europe's toughest ruling on software piracy. He now faces prosecution in Britain.

JULY, 1999 Mathews is following 120 additional cases of piracy of Microsoft software in Europe. They range from replication plants in Bulgaria to Web businesses hawking pirated programs.

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hiding PolyMould. The reconverted grain store stood on the edge of Longstanton, a rural village down the road from Cambridge. The plant had started producing compact disks in August, 1997.

Mathews suspected that Staud's factory was a pirate haven. But he had no evidence. That's why Cambridge police, he says, showed little interest in pursuing the matter. (Cambridge police, citing an ongoing investigation of Staud, decline to answer questions on the case.) So Mathews, acting by himself, put Staud's plant under surveillance. He talked to his neighbors but kept clear of employees for fear of alerting Staud.

MOVING UPSCALE. Meanwhile, all across Europe, bootleggers using new CD-recorders were putting together compilations of pirated programs and marketing to a vast public through the Web. Plenty of pirates, Mathews learned, were moving upscale. At least one ring of digital buccaneers in Europe, for example, conspired with warehouse workforces to steal software CDs packaged with new computers and sell them on the black market. Other rings burglarized plants in Europe, taking Microsoft guarantee certificates to make pirated disks pass for legitimate ones. A 1996 heist in Ireland and two break-ins in Scotland in 1997 supplied Europe's underground with years worth of legitimate guarantee certificates.

At the same time, superior counterfeit software—including Microsoft Office—was hitting the top end of the market. Mathews suspected some of it was manufactured in Cambridge. In early 1998, he contacted legitimate suppliers who were printing manuals and manufacturing plastic cases for Staud's

plant, which also produced licensed music and software. In late July, one supplier provided a crucial lead: A big shipment was headed to Germany. The goods, the supplier believed, could be counterfeit.

Cambridge police promised to follow the truck. But late July was vacation season, and the police force was short of manpower. To Mathews' dismay, the truck was making its way out of Britain unobstructed. He found out that it was headed to Germany via the Netherlands. He called police in Britain and Germany. No luck. "My interest was to get the police talking to each other," he says. "But they have a problem with protocol."

Finally, Mathews called a customs inspector in Cologne. The Germans agreed to intercept the truck outside of Aachen, near the Belgian border. On July 31, they stopped the truck and inspected it. Inside they found 75,000 CDs and 55,000 manuals—all counterfeit, it was later learned. The shippers called Staud on his car phone, informing him of complications. He later arrived on the scene in his BMW and was arrested.

Now, it was a race to capture evidence in the Cambridge plant. Mathews asked Cambridge police to launch a raid. They told him they were too busy. So Mathews and Microsoft lawyers rushed to London, where they applied to a judge for a civil search warrant.

They reached the court in late afternoon, got the papers, and headed to Cambridge. Near midnight, they reached the silent plant. But not until 7 a.m. did the Microsoft team persuade the PolyMould guards to let them in.

The next day, Staud's employees arrived for work only to find the factory shuttered. Two weeks later, Cambridge police dispatched 20 officers, Micro-

says, to oversee evidence-gathering. British police are continuing their investigation into Staud, who also faces charges in Britain. British courts bars Staud's employees and the police from commenting.

At his trial in Aachen in June, Staud sat impassive as his two lawyers tried to punch holes

in Microsoft's case. The defense argued that Staud, living in Luxembourg, a victim of pirating colleagues in Britain. He had no reason to believe they argued, that his plant, which made legitimate licensed music and software, wasn't also licensed for Microsoft. They lamented the evidence still unlinked and key in Britain. "We never had a look into the details," says Udo Lehbruck, his lawyer, who is appealing the case.

GROWTH INDUSTRY. Staud's interception, of course, represented just a fraction of pirated software in Europe. But the case was the first to draw attention to software counterfeiting in the region—and to punish it harshly. No European Union officials in Brussels, weighing continentwide standards for combat piracy. But the problem won't get any easier as the EU expands to the East. "Bulgaria alone has enough plants to supply all of Europe," says Kenneth Lara, European legal counsel for Autodesk Inc., a U.S. software company.

In Microsoft's Reading office, Mathews doesn't have time to savor his victory in the Staud case. He's grappling with a growth industry, just as he was in his cocaine-policing days on the Mexican border. In fact, with two new assistant investigators, Mathews is pursuing 120 new cases for Microsoft. But as the technology grows more sophisticated, so do the criminals. Software piracy shows no signs of slowing down, in Europe or elsewhere—not long as information is worth money.

By Stephen Baker in Aachen and Inka Resch in Paris



DATA: BUSINESS SOFTWARE ALLIANCE



PIRATE'S PARADISE: Counterfeiters sell through Barcelona's outdoor market

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3. In the "Add Location" window, type a name for the location (for example, TCP/IP location).
4. Choose **Add a custom connection (for example TCP/IP)** and click "Next." A TCP/IP location will be created automatically.



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Keyword: Billing

TRANSFORMING THE ART OF THE DEAL

The Net is causing underwriters to rethink their practices

When Network Appliance Inc., an Internet-friendly software outfit in Silicon Valley, wanted to raise \$140 million in a stock offering in March, company executives couldn't face another stretch of plane flights, hotel food, and suffocating conference rooms. Instead of hopscotching across the country to meet investors on an investment banking "road show," they decided to try a better way. "We're a technology company, right?" says Chief Executive Dan Warmhoven. "So let's use technology to solve our business needs."

Lehman Brothers Inc., the company's lead underwriter, was happy to oblige. Technology investors knew Network Appliance because its stock was already publicly traded and many had met Warmhoven before. And with \$290 million in annual sales, the outfit had a proven record. So Lehman set up a "virtual" road show. Password-packing investors clicked onto the Internet to hear Warmhoven describe slides about the company as they flashed across their computer screens. The investors tapped into the taped presentation at will. Then, for three days, NetApp took calls for questions, mostly from institutions. Says Marc L. Paley, co-head of Lehman's global equity capital markets unit: The technology "saves a huge amount of time and expense...and investors demand and want it."

Internet road shows are just part of a revolution in the way investment bankers do their jobs. Just as online trading is shaking up the way stock is bought and sold in the aftermarket, the Net is reshaping the way underwriters bring offerings to the market. From the

pitch whereby Wall Street powerhouses offer their wares to companies that need money to the way the securities are priced and delivered, the Net is forcing underwriters to rethink their practices. At Merrill Lynch & Co., managers view adapting to the new investment banking as "the most critical and potentially most far-reaching change they will face in their careers," says direct markets chief Michael Packer.

NO LONGER SACRED? To be sure, the adjustments are coming fitfully and unevenly, with some Wall Street houses rushing to be early adopters and others decidedly skeptical, even a bit scared. If much of the underwriting process migrates to cyberspace, efficiencies could well erode the sacrosanct 7% fee. To drive acceptance of what executives call a "disruptive technology"—one bringing paradigm-shifting change—Merrill Lynch even went outside, to publishing firm Simon & Schuster, to recruit E-commerce expert Packer. While the firm is a leader in using the Net, Merrill eq-

uity capital markets chief Michael Ryan acknowledges change is tough. I put it to a vote," he says, "the majority would vote for the status quo."

Some Wall Street executives insist the Net can't replace person-to-person contacts. Pressing the flesh, says Goldman, Sachs & Co. managing director Lawton W. Fitt, will continue to dominate everything from bidding for business to persuading investors to buy. "When it comes to the way we render advice to our clients, I don't see it [the Net] as revolutionary," says Fitt, who deals regularly with Net companies seeking capital. "The human element is not coming out of the process."

Over time, though, the human element may become less important. The best example is the road show, where many underwriters now routinely schedule Net presentations instead of, or along with, personal visits. NetRoadshow, an Atlanta-based unit of broadcast.com, found the demand for these events growing rapidly (page 103).



ready, technology is forcing some searching among firms and regulators. The Securities & Exchange Commission is revisiting rules that limit road shows to select institutional audiences. Road show participants want to balance public demand for information against the risk unsophisticated investors may get misled. Says former SEC Commissioner Brookings Institution senior fellow M. H. Wallman: "We need to re-examine some of the mechanisms that we use to ensure the information is properly scrubbed and accurate." Still, the Net now is letting underwriters more easily put information in

investors' hands. Prospectuses are available through such Web sites as Renaissance Capital Corp.'s theiposite.com, IPOmaven.com and IPO.com. Since IPO.com claims a million visits a month, investors clearly crave such information. "Our users are looking for all kinds of things related to IPOs," says Brad Sinrod, IPO.com Inc.'s president. (The company also provides data to BUSINESS WEEK Online.)

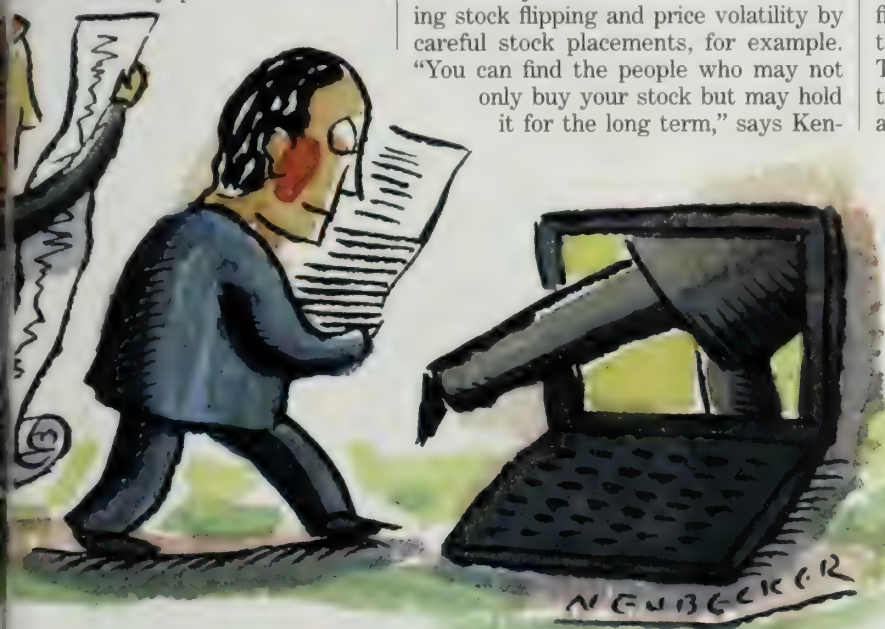
Eventually, the Net may allow underwriters to better target individual investors. And as they develop investor profiles, they could have a broad effect on the way the markets behave, reducing stock flipping and price volatility by careful stock placements, for example. "You can find the people who may not only buy your stock but may hold it for the long term," says Ken-

neth D. Jones, chief of staff at Thomas Weisel Partners in San Francisco.

But the Net is more than just a marketing tool. It has become a standard research aid, for instance, for Wall Street due-diligence reviews. "There's no question that the research that used to be done by going to the library is being done now over the Net," says Goldman's Fitt. "You've got much more information at your fingertips." By using such services as Yahoo! Finance, Hoover's, or EDGAR Online, researchers can quickly snare data about rivals, partners, and customers. Lead underwriters can also better coordinate with firms that co-manage deals with them thanks to E-mail or dedicated Web sites. That could make obsolete the conventional "data rooms" where deal materials are typically stored by the boxload.

MAVERICK. Still, the medium gives some underwriters pause, especially about pricing securities. Few East Coast firms like the approach tried by California maverick W.R. Hambrecht + Co.: taking bids from investors via the Net to get the most appealing price. In the two stocks the firm has taken public so far—Ravenswood Winery Inc. and Salon.com—some investors were disappointed that there were no big post-offering price spikes. "Mediocre results," says Renaissance Capital analyst Randall Roth.

Of course, defenders of Net auctions say the lack of a spike only proves that the pricing is



The Old Way and the eBiz Way

Selling securities to investors may never be the same

	THE OLD WAY	THE EBIZ WAY
PITCH	Underwriters appear before corporate execs in "beauty contests" to win accounts.	Online "pitch book" easily answers such questions as "who is your technology analyst?"
RESEARCH	Underwriters study client company, interview executives, customers, bankers.	Internet lets underwriters quickly gather data on the company.
WRITING THE PROSPECTUS	Bankers and lawyers laboriously fashion detailed descriptions of firm, finances, plans, and risks.	Online drafting, speedy document reviews. Lawyers whisk drafts around by E-mail.
ROAD SHOW	Executives hit road for days or weeks, meeting potential investors.	Management makes presentations online.
PRICING THE DEAL	Bankers poll potential investors by phone. Underwriter and company set offering price per share, along with amount to be raised.	Auctions, such as W.R. Hambrecht's, would reduce subjectivity.
DISTRIBUTION	Institutions and wealthy investors get first crack at securities.	Pioneers, such as DLJ Direct, distribute more equitably.

DATA: THOMAS WEISEL PARTNERS LLC; BUSINESS WEEK

fairer, since it comes from a broader audience. Underwriters generally price such deals now by informally taking "indications of interest" from a few institutional buyers, but the small field means the pricing can be off. "What we're really trying to do is to broaden the market for IPOs," says firm Chairman William R. Hambrecht.

Even if Hambrecht's method proves too radical for underwriters, the Net still could influence pricing. Underwriters could easily contact more potential buyers to get better soundings. "If you can cast your net far enough, you'll get enough information about the marketplace to price IPOs and not leave that much on the table," says Merrill's Ryan.

Hambrecht is really unsettling Wall Street with another Net-inspired

thrust—this time aimed at underwriting fees. Since the Net can save hefty amounts of money, he says, firms ought to make do with 3% to 5%, instead of the standard 7%. That would play nicely to regulators troubled by the lack of fee competition. Antitrust officials at the Justice Dept. in April launched a probe of the major brokerage firms for alleged underwriting fee price-fixing.

Wall Street's insurgents, of course, are pushing the uses of the Net hardest. Upstarts such as Wit Capital, E*Offering, and the fbr.com unit of Friedman Billings Ramsey Group Inc. of Arlington, Va., are driving change—and winning business. But corporations still prefer the big names because of their prestige, market clout, and research capabilities. Goldman, Morgan Stanley, and

Merrill together managed 55% of initial offerings in the first half of year, up from 35% in 1998's open half, according to Securities Data Co.

As the mainline firms make more of the technology, they will likely be at their edge. It's no wonder that Goldman in March took a 22% stake in Capital and that Lehman, on June, cut a deal with Fidelity Investments that gives Fidelity access to Lehman research prowess and stock offerings. "The technology is here, and it is a competitive fight," says Lehman's Paley. "You can't fight it." Indeed, the firms that turn out to be faster, more efficient, and better underwriters will likely be those to prove the most Net-friendly.

By Joseph Weber in Toronto, and Peter Elstrom in New York

IF THE INVESTOR WON'T GO TO THE ROAD SHOW . . .

Road shows are the bread and butter of investment banking. Corporate executives travel throughout the country to promote the virtues of their companies' latest stock or debt offerings. Now, executives are also traveling in cyberspace, and the company that's doing a lot of the transporting is an outfit called NetRoadshow.

Based in Atlanta, NetRoadshow is run by entrepreneur Brad Hammond, 46, formerly in institutional sales at Robinson-Humphrey Co. He got the idea in 1995, but it took him about two years and a letter from the Securities & Exchange Commission to get the business under way. In 1998, NetRoadshow broadcast about 132 productions for clients, including Bear Stearns, Donaldson Lufkin & Jenrette, and Goldman Sachs.

Here's how it works: NetRoadshow sends out film crews to tape the company presentation before the investment bank's institutional sales force. Then a Web version is created. Management appears on the left side of a computer screen, talking about synchronized slides that flash on the right side. The investment bank hands out a password to clients, who can review the road show at their leisure. Bankers get information on who watched the road show and for



HAMMOND: His sites grab "important eyeballs"

how long. Then they follow up with sales calls. "We've seen their effectiveness grow each and every day we've used them," says Michael T. Ott, head of equity capital markets at Deutsche Bank Alex. Brown Inc. **OPTIONS.** So far this year, NetRoadshow has done 418 such events. The top-of-the-line NetRoadshow, which includes audio and telephone options for users with slow Net connections, goes for as much as \$20,000, says Hammond. In the second quarter of '99, NetRoadshow did more than \$2 million in sales and is "very profitable," he says.

In January, broadcast.com, a leading broadcaster of streaming media on the Web, agreed to acquire NetRoadshow for \$50 million in broadcast.com stock. On Apr. 1, Yahoo! Inc. announced it was acquiring broadcast.com, sparking a run in the stock Hammond received. "It worked out great for me, but it also worked out great for them," he says. "Some of the most important eyeballs in the investing world are looking at our material daily."

Today, about 85% of Hammond's business is road shows. But he plans to go beyond road shows to sell Internet broadcasts of quarterly earnings announcements, investor conferences, and analyst presentations. "We're quickly expanding into other stuff," he says.

Hammond isn't the only one to have the idea of holding electronic road shows. Competitors include Bloomberg LP and NextVenue. And the roster of rivals will grow as NetRoadshow does more kinds of financial Web broadcasts. But with strong relationships forged with top investment banks and backing from Yahoo! and broadcast.com, NetRoadshow is poised to become a bigger part of Wall Street's Internet game plan.

By Amey Stone in New York

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intel

The Computer Inside

OFFSHORE TRUSTS: NOT SO WATERTIGHT

Recent U.S. court rulings make it harder to stash funds abroad



after they argued it impossible to repay money from their Cook Islands trust. "These big nails in the coffin that could soon 'eliminate offshore trusts as an asset-protection tool,'" says Jay D. Adkisson, who publishes *The Adkisson Analysis*, an asset-protection newsletter.

Lately, the rich have flocked to set up offshore trusts. Although there are no hard figures, Adkisson says he would not be surprised if over 100 Americans have set up offshore trusts in the last five years." Estimate of money stashed offshore exceed \$1 trillion. The result of the lawsuit appeal is obvious. As a result of the lawsuit explosion, "most don't think their money is protected in America," explains Arnold S. Goldstein, a lawyer who specializes in asset protection.

Among popular havens are the Cook Islands, Gibraltar, Nevis in the Caribbean, and a dozen other small islands that have drafted trust laws to lure Americans. "These erect a series of brick walls" designed to keep U.S. creditors at bay, says Denver attorney Barry S. Engel, who co-authored the Cook Islands' trust law. Most of these jurisdictions refuse to recognize U.S. court

Like many other well-heeled Americans, options trader Stephan Jay Lawrence succumbed to the lure of offshore trusts as a supposedly safe way to protect his assets. He lost big-time during the 1987 crash, with margin calls putting him in hock to his brokers at Bear Stearns & Co. Not long before he was socked with a \$20.4 million arbitration award in 1991, Lawrence put the bulk of his assets—upwards of \$7 million, according to court records—into a trust in the Republic of Mauritius. And when Bear Stearns moved to collect, Lawrence filed for bankruptcy.

But last September, a bankruptcy court judge in Miami refused to let Lawrence discharge his debts and thwart Bear's collection efforts. And the

Mauritius trust was the primary reason. "A bankruptcy discharge for a debtor who engages in this type of conduct should be as rare as the dodo bird that once graced the shores of Mauritius," ruled Judge Thomas S. Utschig.

The Lawrence case is one of several setbacks that are raising questions about the future of such trusts. They are no longer an effective tax stratagem. In cases ranging from divorces to plain old debt evasion, more judges are refusing to accept these trusts as a legitimate way of stiffing creditors. And in the most chilling blow yet, in mid-June Judge Charles E. Wiggins of the U.S. Ninth Circuit Court of Appeals in San Francisco upheld a lower court's decision to jail a California couple for contempt

judgments, forcing creditors to start over again in the remote home of the trust, where the odds of success are slim. Clients usually cede control to a foreign trustee to insulate themselves further from legal attack.

LOST LUSTER. Until recently, the trusts worked well. "We cut off our creditors at the pass" by getting them to settle, says Gideon Rothschild, a New York lawyer who heads the American Bar Assn.'s asset-protection committee. And many such settlements have been meager. Engel brags that of the 500 trust challenges in which he has been involved, "the average settlement been less than 10¢ on the dollar."

But now the trusts are losing the appeal. Although some promoters



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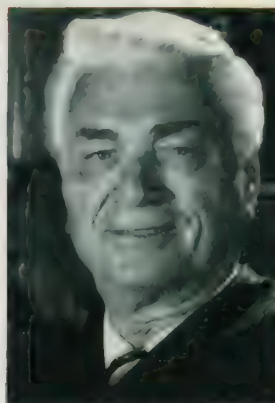
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GO TO JAIL: Wiggins let
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By William C. Symonds in Boston

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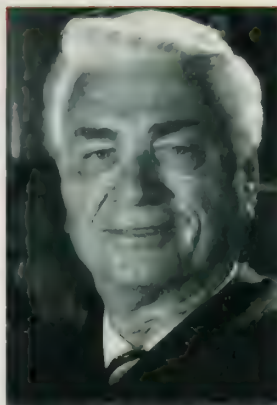
working trusts as a way to evade taxes, the Internal Revenue Service effectively closed that loophole years ago. Rigorous reporting now require any U.S. citizen who is a trust or who transfers money as to notify the government with- days, or face heavy fines. As a an offshore trust "won't save you ng in taxes," says Rothschild.

Trusts are becoming less effective shielding your assets from an spouse in divorce court. Take the of Dr. Roger Reichers, a Mt. Kisco urologist who moved \$4 million Cook Islands trust that didn't ally designate his wife, Mary, as a beneficiary. When Mary later filed for divorce, Roger argued that he had been to protect the family from mal- ce claims, not keep money away his wife. But a New York judge in July, 1998, that the trust had unded with "marital assets," and Mary was entitled to half the \$4 a. Roger is appealing the ruling. t August, another New York judge even further in a case involving a illion Cayman Islands trust set up w York businessman Vazha Pap-

son. Ruling the trust "was a bald attempt...to place marital property out of his wife's reach," the judge ordered Vazha to terminate the trust and bring back the money to be divided up. Given such rulings, "I don't favor using trusts in a divorce context," says Austin (Tex.) lawyer Duncan E. Osborne, a leading offshore expert.

Offshore trusts are also coming under attack in bankruptcy courts. One of the earliest cases involved Larry Portnoy, a New York executive who had put assets into a trust in Jersey—in the Channel Islands—and then asked to be discharged from his debts to Marine Midland Bank. But in 1996, the U.S. Bankruptcy Court judge in New York refused to discharge Portnoy's debts, arguing such a result would "offend strong [state] and federal bankruptcy policies."

In the Lawrence case, Judge Utschig was far more scathing in his refusal to accept the Mauritius trust. In late June,



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Lawrence abandoned his appeal of Utschig's ruling. That has freed his creditors "to leave no stone unturned" to crack the trust, says Paul S. Singerman, the Miami lawyer for the bankruptcy trustee.

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For all the bad news, Engel and other hard-core advocates aren't deterred. These rulings "won't limit the use of trusts by me," vows Engel, who says properly designed trusts are still working well. Arnold Cornez, a consultant and author of *The Offshore Money Book*, says offshore annuities and life insurance policies could prove more effective since, when you buy them, you are giving your money to a third party. "There is very little downside to the process," adds Rothschild. In the "worst-case scenario," if you are threatened with jail, "you can always become an expatriate," he adds. Or you can do the unthinkable—and pay up.

By William C. Symonds in Boston

HOW THE COURTS ARE UNDERMINING OFFSHORE TRUSTS

Mary Reichers vs. Dr. Roger Reichers; New York State Supreme Court, July, 1998

In divorce action, the husband allegedly secretly shifted \$4 million into a Cook Islands trust before his wife filed for divorce. Although the trust didn't name his wife, Mary, as a beneficiary, the court ruled she was entitled to the \$4 million anyway.

Marina Papson vs. Vazha Papson; New York State Supreme Court, August, 1998

In later divorce decision that went even further, the husband allegedly moved \$1.5 million into a Cayman Islands trust without telling his wife. Arguing the trust was a violation "of public policy," the court ordered the husband to terminate the trust and bring the money back to New York.

Stephen Jay Lawrence; U.S. Bankruptcy Court, Miami, September, 1998
Options trader allegedly moved some \$7 million into a trust in Mauritius, before an arbitrator ruled he owed Bear Stearns \$20 million. Arguing he no longer had access to the money, the trader filed for bankruptcy in 1997. In a scathing 1998 ruling, the U.S. Bankruptcy Court refused to grant discharge of debts.

Federal Trade Commission vs. Denyse and Michael Anderson; U.S. Ninth Circuit Court of Appeals, June, 1999

The biggest blow yet, the appellate court upheld a lower court's decision and the Andersons to prison on contempt charges, after they argued it was impossible for them to repatriate money they had moved to a Cook Islands trust. The FTC charged the trust protected money that the Andersons allegedly had earned from operating a telemarketing Ponzi scheme.

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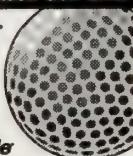
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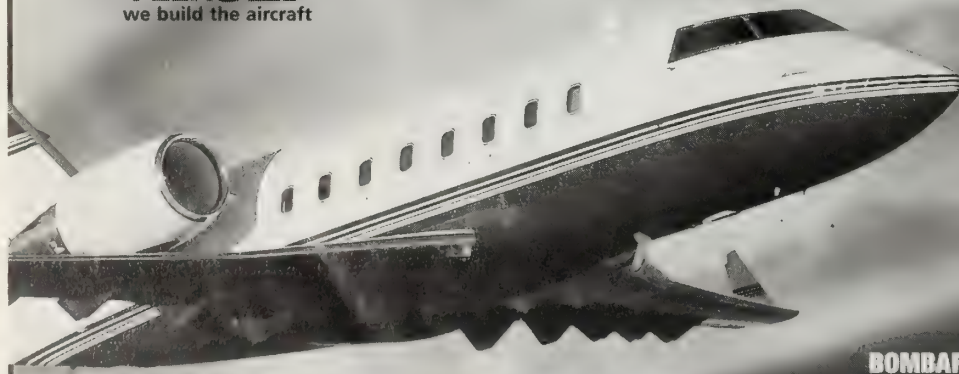
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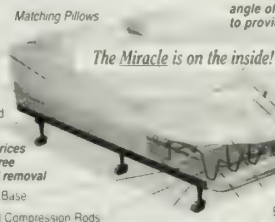
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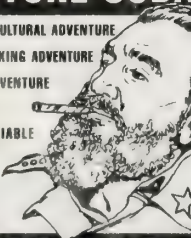
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FLIGHT TO SMALL CAPS?

corporate action suggests a turnaround

Wall Street is finally starting to think small. Small-cap stocks have suffered, falling 6.3%, from the beginning of 1998 through the first quarter of this year. But in the second quarter, the Russell 2000 stock index, which consists of small-cap companies, posted a total return of 15.55%, vs. 7.05% for the S&P 500. In June, for the first time this year, investors put more money into small-cap mutual funds than they took out, according to Minneapolis market researcher Leuthold Group. Several analysts say it's the beginning of a turnaround. "Because the market is still relatively cheap on a value basis, investors are starting to buy," according to Mary Lisanti, investment officer for equities at Star Investment Management.

BUYBACKS. But the real precursor of a small-cap bull market may be the increase in corporate activity, including insider buying, in small companies. According to a study by First Call Corp. last week, insider buying of small-cap stock has averaged two buys per company since last October. In the prior year, insiders outpaced buying by a 3-to-1 margin. "Small companies are announcing share-repurchase programs left and right. It makes sense because their earnings are strong, their shares are cheap," says John Buckingham, managing director at The Cent Speculator, a newsletter that follows small-cap stocks. Preston Key, manager of the T. Rowe Price Small-Cap Value Fund, agrees: "The market's unwillingness to value the small company at a fair price creates a rare opportunity for management to buy their own stock at a bargain price."

It's not just corporate insiders

who are on a small-cap shopping spree. Large companies are snatching them up, too. In the past year, 17 companies in Athey's 210-stock portfolio have been the subject of takeover announcements by larger companies for stock or cash at prices averaging 30% above the market price before the merger was announced. "Large companies with high [price-earnings] stocks or cash are scooping up these small companies because the cost of borrowing is cheap and the cost of equity is cheap," says Athey.

According to a recent Merrill Lynch & Co. study, mergers and acquisitions among companies with market caps under \$2 billion will be the highest in a decade. And M&A deals in companies with market caps from \$200 million to \$1 billion are expected to increase to 168 this year from 156 last year.

Perhaps most noteworthy, leveraged-buyout activity, when an investor group buys a company mostly with debt and uses its asset sales or cash flow to re-

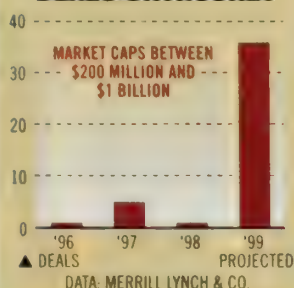
pay the money, is also increasing. There are 36 deals projected for this year, compared with one in 1998 (chart). "The only time you see LBO firms get involved is when the target companies are absolutely cheap," says Athey. "The LBO firm is borrowing money at around 9% to 11% to finance the buyout, and they've got to pay that back, so the deal has to make sense on its own merits." Five companies in Athey's fund are being taken over in LBOs.

All this corporate action bodes well for the small-cap sector, say experts. "If the corporate deal flow continues, then there may be a resurgence of one of the most difficult components of the small-cap thesis—namely, small-cap value stocks," says Satya Pradhuman, director of small-cap research at Merrill Lynch. Some reasons: Investors who are looking for takeover premiums should start moving into small-cap value issues, and insider buying should continue to boost small-cap share prices. "Small caps need about a year of good performance before the big institutional money starts piling in," says Lisanti. Once that happens, the stocks should get a much-needed pop.

And that would be the biggest deal of all for small caps.

By Marcia Vickers
in New York

SMALL-CAP LBO DEALS SKYROCKET





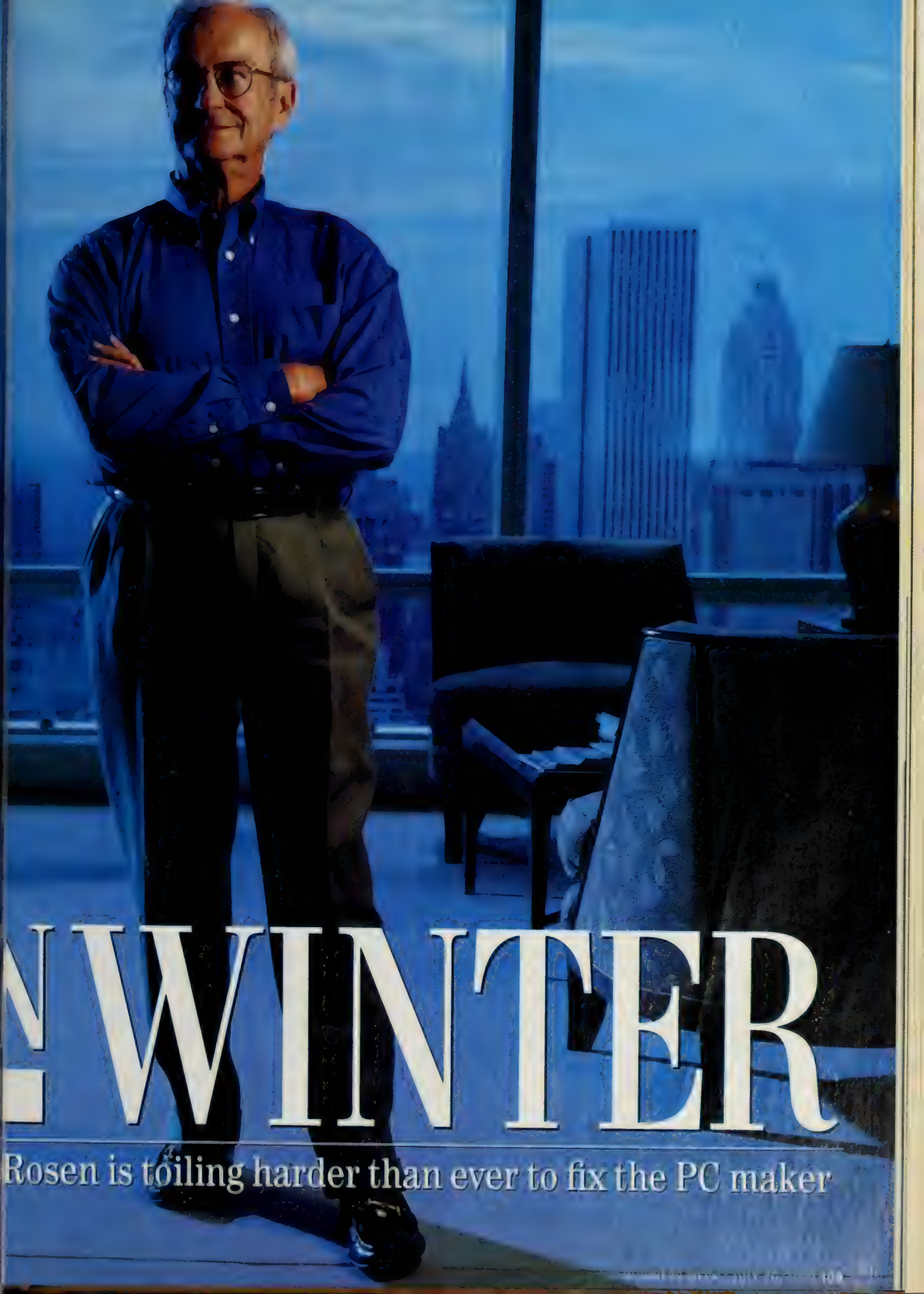
Cover Story

Normally, life for Benjamin M. Rosen is like a cake coated with an especially thick layer of frosting. From his lair on the 43rd floor of a glitzy tower in midtown Manhattan, the 66-year-old computer-industry legend looks out on a stunning view of Central Park and the Manhattan skyline. He's surrounded by the fine things he has collected—a Picasso drawing on his dining-room wall, a Botero bronze sculpture by the window, and a 130-bottle collection of single-malt Scotch lined up on the breakfront. This is a portrait of a man in the winter of his life savoring his hard-won riches.

The phone rings. He jumps up, then checks

THE LION

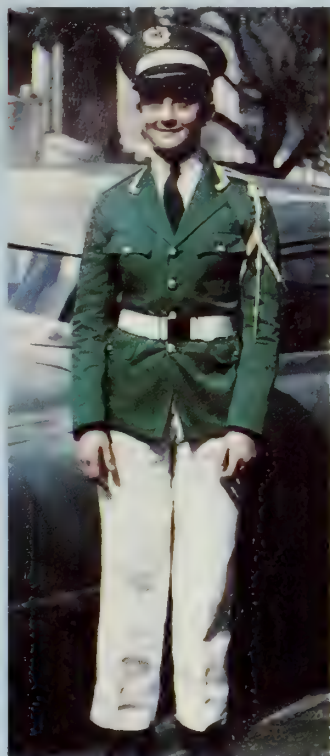
At 66, computer legend



N WINTER

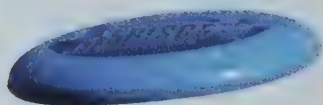
Rosen is toiling harder than ever to fix the PC maker

A DIGITAL LIFE



MAR. 11, 1933 Benjamin Maurice Rosen born in New Orleans. One of the high-lights of his youth was marching in the Mardi Gras parade.

1954 Earns a BS in electrical engineering from the California Institute of Technology, followed in 1955 by a masters from Stanford University.



1959 Rosen spends six months bumming around Europe. He introduces the Frisbee to the South of France.

1961 After receiving an MBA from Columbia University, he embarks on a 20-year career as an electronics industry stock analyst on Wall Street—ending as a vice-president at Morgan Stanley.



1977 Apple Computer launches the Apple II personal computer. Rosen is so taken with it that he carts one around to meetings with Morgan Stanley customers to demonstrate its usefulness as a business machine.

1978 Launches his annual PC Forum conferences, schmoozefests that help coalesce the computer industry.



1981 With semiconductor entrepreneur L.J. Sevin, he starts venture-capital firm Sevin Rosen Funds. Companies

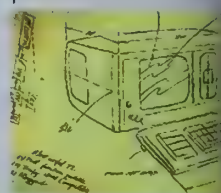
it backed now have a combined market cap of more than \$100 billion.



1982 He funds hippie entrepreneur Mitchell Kapor's upstart Lotus Development.

COMP

1983 He is appointed man of Compaq Co position he holds to



The company releases product, the Compaq Portable, weighing 2 and costing \$2,995. goes public in December raising \$67 million.

1991 He and the board fire Compaq Co-Founder and CEO Rod Canion after a disagreement over product strategy. Looking back, Canion says it was the correct move to make at the time.

himself. "I won't worry about that. It isn't the important line," he says. He sits down, but the spell is broken, and reality sets in. Rosen's lush life is on hold, and now the visionary financier who backed the likes of Compaq and Lotus, is toiling perhaps harder than ever before. This is no time to stop and smell the single-malt Scotch. As chairman of Compaq Computer Corp., he presided over the Apr. 17 firing of Chief Executive Officer Eckhard Pfeiffer and then stepped in as acting CEO.

"PERVERSE PLEASURE." Now Rosen is neck-deep in perhaps the most difficult job in all of technology: fixing Compaq, a \$31 billion behemoth beset by slowing growth, slipshod execution, and a baffling miscalculation on the importance of the Internet. In three out of the last six quarters, either Compaq's revenues or earnings have fallen short of expectations. Its U.S. PC sales in 1999's first quarter grew a measly 10%, while rival Dell Computer Corp. racked up 55% growth. And Compaq is forecasting a \$260 million loss in the quarter just completed. The stock is down 46% since late January, to about \$26 today. Even Lewis E. Platt, CEO of Hewlett-Packard Co., another computer giant that's searching for a new CEO, bristles at the suggestion that the two companies are in the

same boat. "We're not confused," he snaps. "I'd argue Compaq is."

Rosen couldn't disagree more. Yet it's perceptions these that have him working 12-hour days to tackle the problems at Compaq. It's anything but business-as-usual for Rod, one of the industry's most influential power brokers—a spoken man, who has worked for decades behind the scenes spotting the trends and pulling the strings. Never mind the startups that he has invested in over the past few years which he loves to drop in on. Forget his usual prowling to the overlooked entrepreneur that might spawn a brand-new industry. And golf, his passion of the past 11 years? His memberships in eight swank country clubs are sitting idle. "Li did I know I'd be working this hard at 66," he says.

Yet, he also takes a "perverse pleasure in this, in spite my grouching about the work," he says. Rosen is convinced Compaq's strategy is a sound one. "Many of the press and analyst reports are negative. But I know we're going to turn around and I'm going to take a great deal of pleasure in it," says. He ought to. The value of his 5.5 million shares of Compaq has dropped to \$143 million—about half what it was six months ago.

After a career of nearly 40 years, Rosen's stature is huge,



1993 With rocket scientist older brother, Harold Rosen, he launches Rosen Motors, an attempt to go into industry to build a new turbine engine. The attempt fails in 1997.

Compaq overtakes IBM to become the world's largest PC company.



1998 Rosen invests in Ask Jeeves, the easy-to-use Internet search service. The company

goes public in June, 1999, and his 5.8% stake is worth nearly \$90 million. Compaq announces plans to acquire Digital Equipment Corp. for \$8.4 billion as part of its plan to become a major player in corporate computing markets.

APR. 17, 1999 Rosen and the Compaq board fire CEO Eckhard Pfeiffer. Rosen is appointed acting chief executive while the search for a new CEO goes on.



JUNE 17, 1999 Rosen announces a major reorganization at Compaq and the company forecasts a \$260 million loss for the second quarter.

Though Compaq is far from a startup these days, the company gives him an opportunity to do what he loves about business. "What's most gratifying to me is to take sketches or ideas and create a living thing employing thousands of people—and creating new ideas. It's an exhilarating feeling," he says.

At this time, though, Rosen had hoped to have someone at the helm. He has been forced to recalibrate his ambitions and now is expecting to land a CEO some time in the next 60 days. Whoever it is, it won't be his first choice. That late, Continental Airlines Inc. President Gregory B. Borenstein, dropped out on June 28. Officially, Borenstein is happy where he is. Unofficially, those familiar with the scussions say that Borenstein was worried that Rosen might be a backseat driver who wouldn't give him free rein to run the company.

He is the legend of Rosen. It's huge even in techdom, a mix of jumbo personalities and deafening hype. For the past 38 years, Rosen has had an uncanny sense of where the technology was headed and how to cash in on it. As a Wall Street analyst in the '60s and '70s, he was the first among them to recognize the PC revolution and put the likes of

Intel Corp. and Apple Computer Inc. on the map.

Rosen was the industry's agenda setter. His PC Forum conferences—where he entertained the young William H. Gates III and pals by balancing chairs and boxes on his chin—were must-attend schmoozefests that solidified the issues of the coming year. Later, as a venture capitalist, he was the first to spot the promise in Compaq and software-maker Lotus Development Corp. And when Compaq lost its way in 1991, it was Rosen who stunned the industry by booting out CEO and co-founder

Joseph R. "Rod" Canion, putting the company on an aggressive course that made it No. 1 in PCs.

Now we'll see if Rosen still has the Midas touch. In the 12 weeks since he swapped his posh New York pad for a hotel in sweltering Houston, he has been on a tear. Rosen and his two partners in an interim Office of the CEO—directors Frank P. Doyle and Robert Ted Enloe III—have an overarching goal: To whack \$2 billion in expenses, speed up the company, and dive headlong into the Internet game. Right off, Rosen took an axe to Compaq's sacred sales channel, slashing the number of distributors from 40 to four as a way to better manage inventories. He streamlined the company's structure into three new divisions—consumer PCs, business PCs, and corporate computing and services. More important, each of those divisions now has profit responsibility.

RAISING EYEBROWS. Transforming Compaq from a no-show into an E-commerce contender is now Priority No. 1. Rosen vows to move the needle on sales of Compaq business computers over the Internet from 15% to 25% by the end of the year. He has set aside \$100 million to boost the company's profile as a supplier of powerful Internet computers and services. He's pushed out a half-dozen managers and is looking to hire an Internet czar. And, in an eyebrow-raising move, he has sold controlling interest in the company's AltaVista Web search engine subsidiary to gain a strategic alliance with CMGI Inc. and its portfolio of 40 Web companies.

For the most part, Rosen & Co. are getting kudos for their efforts from Wall Street analysts—and acknowledgement that it was time for Pfeiffer to go. Already the stock has nudged up 4 points since they stepped in. "Eckhard was all talk and no action," says analyst Ashok Kumar of Piper Jaffray Inc. "Ben and the boys are moving. They're biting the bullet and taking the pain now."

But is it too much pain? The past three months have been a whirlwind, even by CEO standards. And they've been downright stunning for someone just holding down the job temporarily. That has experts fretting that Rosen may be going too far, and no CEO candidate worth his or her salt will want to step into the middle of his grand plan.

Rosen seethes at such a notion. "It's not true," he says. "During good times, which has been most of Compaq's 16 years, I've been a normal board member. I go to meetings. I talk to the CEO. I help if he wants." He has no interest in managing Compaq long term, he says, adding: "I'm a dilettante, not a worker." Besides, Rosen says he has had little choice but to move fast with rivals outpacing the company on so many fronts. "We're operating on Internet time now," he says. "The industry is moving so rapidly there's a big penalty for not acting."

It may turn out that Compaq is penalized anyway. Rosen's new streamlined structure may speed things up, but it won't put Compaq any closer to the biggest corporate customers, analysts say. That's a must in today's marketplace, where PC

Cover Story

techdom's jumbo personalities and deafening hype

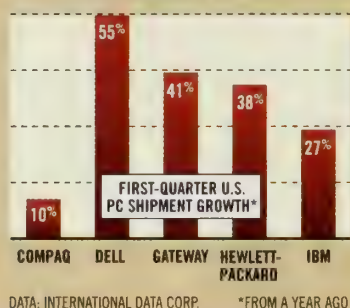
ROSEN'S TURNAROUND PLAN

REORGANIZE OPERATIONS To better understand customers, the company is being split into three divisions—PCs for consumers, PCs for businesses, and high-powered computers and services for big corporate customers.

RESTRUCTURE DISTRIBUTION In an effort to reduce inventories in its distribution channels, Compaq in August will reduce the number of wholesalers it deals with from 40 to four.

TAP THE POWER OF E-BUSINESS The company increased its spending for a new initiative—called Non Stop eBusiness—by \$100 million. It hopes to sell lots of high-powered Digital and Tandem computers to Web sites.

COMPAQ'S GROWTH HAS SLIPPED...

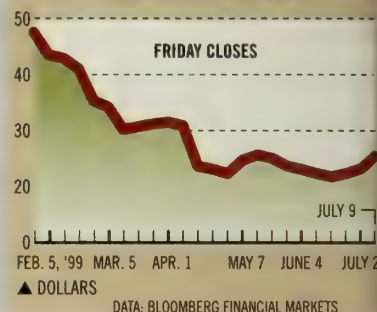


SELL MORE COMPUTERS ONLINE

To boost online sales from less than 15%, Compaq is adopting a centralized system for handling E-commerce orders from customers and distribution partners. The idea is to match the efficiencies of direct-seller Dell Computer.

FIND A NEW CEO The board's attempt to hire Continental Airlines President Gregory D. Brenneman was rebuffed. Now it's back to the drawing board. Rosen is looking for a high-powered executive, even one from outside the computer industry.

...AND ITS STOCK PRICE HAS SWOONED



makers also supply the heavy-duty servers and software that handle a company's biggest jobs. IBM, for example, uses its booming services business to develop tight customer relationships and feed client needs back to its product development groups. Rosen needs to create a similar feedback loop either by beefing up Compaq's service organization or eliminating resellers altogether for the company's largest customers. "Their resellers know more about the client than they do," says Gartner Group Inc. analyst Kevin Knox.

Cover Story

The Digital Equipment Corp. acquisition was going to fix that. Compaq bought Digital last June for \$8.4 billion as a way to offer soup-to-nuts computers and services for corporate customers. Digital also gave Compaq much-needed software skills and rounded out its selection of high-end computer systems—important products that drive the market for services. But so far, Compaq has struggled to integrate Digital and hasn't been able to make the service organization pay off.

Rosen's even bigger challenge may be turning Compaq into an E-player. Compaq traded 83% of AltaVista for a 16% stake in CMGI to give the company a rapid infusion of Net skills. That may prove to be a financial boon if CMGI's stock continues to defy gravity. It's not clear, however, that the deal actually gives Compaq the E-commerce capabilities it will need, such as software so Compaq's computers will be in bigger demand to handle Web-site traffic. "It seems odd to spin off the one thing that they had that really has an established brand on the Net," says James Moore, chairman of management consultant GeoPartners Research Inc.

Rosen isn't buying that. He says that Compaq is by far the market-share leader in PCs, and it can harness Digital's high-powered computers, networking expertise, and ser-

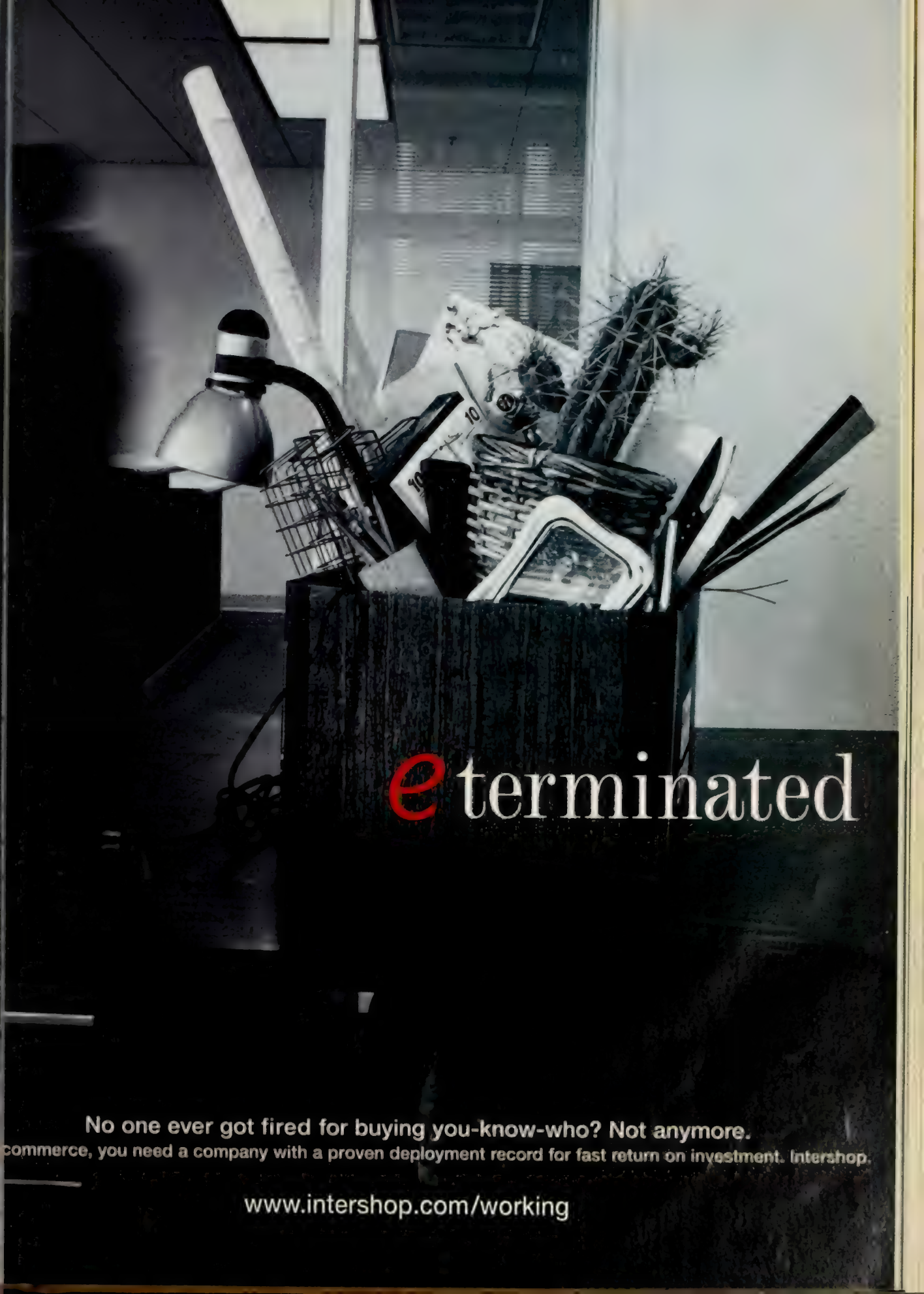
vices. Compaq is better positioned than Dell, he believes, because it can sell computers to customers the way they want to buy them—via the Internet, through retailers, or through Compaq's field sales force. The deal with CMGI, he believes, gives Compaq the ability to sell a potent combination of computers and technology provided by CMGI's Web companies—all sewn together for customers by Compaq's services organization. "I see no reason why we can't be the leading information-technology company in the next few years," says Rosen.

That's trademark Rosen, who's so well-known for his optimism that he's quick to insist he's not "looking through rose-colored glasses." Still, his can-do spirit is starting to infuse the company. Rosen and his sidekicks have busted Compaq's dam of indecision—quickly shifting personnel, approving new advertising plans, canceling corporate jets that had been ordered, and, according to director Tom Perkins, "reducing prison culture" of the executive offices by getting rid of guards and security cameras.

Partners already see a difference in the computer giant. Christina C. Jones, president of pcOrder.com, an E-commerce technology provider, says Compaq moved quickly in June to complete a deal with pcOrder to provide the technology for Compaq's online sales activities. "Having Rosen there really accelerated things," she says. "People at Compaq feel empowered to move aggressively."

Rosen is leading by example. Executives say Pfeffer had become isolated from the troops. Rosen, by contrast, has his meals in the company cafeteria, as do Enloe and DeLoach. The three are reading and answering all their own E-mail. They've met one-on-one and in groups with hundreds of people at headquarters. And they've gone to a series of meetings around the country—the company's so-called Executive Seminars for corporate customers. While travel

Rosen & Co. busted Compaq's dam of indecision, cutting corporate jets, guards, and security cameras



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THEY SAY NO THANKS

A handful of executives have taken themselves out of the running since Compaq began its search for a CEO to replace Eckhard Pfeiffer, who was fired Apr. 17. The company says it hopes to have a new chief executive within 30 days. The latest speculation: It's looking at execs in the communications industry.



**RAYMOND
LANE**

President
Oracle Corp.

The software exec says he shouldn't run a PC company. On Rosen: "Ben let Eckhard Pfeiffer go off and he wasn't paying attention to the business."



**GREGORY
BRENNEMAN**

President
Continental Airlines

Brenneman won't comment, but sources say he was concerned that Rosen would meddle and wouldn't let him run the business with a free hand.



**EDWARD
ZANDER**

President
Sun Microsystems

He's happy running operations at the booming computer company. "None of these PC makers ever make money," he says of Compaq and its brethren.



**DAVID
HOUSE**

President
Nortel Networks

The former Intel exec is leaving Nortel in August, but sources say he's unlikely to take the Compaq job. He thinks Compaq's troubles run too deep.

the trio took side excursions to huddle with some 400 Compaq employees in branch offices around the country.

How is the sexagenarian cramming so much into a short time? Determination, for one. This is a guy who every year leads what friends call the "Bataan death march" of golf—three 36-hole days at Mexico's Cabo San Lucas resorts. On the job, Rosen is superefficient. He and his two partners in the Office of the CEO are jammed into Pfeiffer's old quarters so they can talk continuously and even overhear each other's phone conversations.

Rosen's staff meetings are quick and to the point—usually less than one-hour long. And he has squeezed in conversations with more than 100 customers since mid-April.

None of this should be a surprise. Rosen has never been satisfied with being ordinary and excelled at a tender age. Brother Harold remembers that Benji—his family's pet name for him—learned the trick of doubling numbers at age 3 and would perform on demand, standing on a chair so guests at the family's home could see him. "He got up to 1,048,576—two to the 20th power," says Harold, a semi-retired rocket scientist. "Turns out binary numbers stood him in good stead when the Digital Age came." The urge to entertain has stuck with Rosen, too. He juggles, spins trays on his fingers, and balances chairs on his chin to this day.

"EXHILARATING." There's still a lot of the kid in him. He loves charades and crossword puzzles—completing *The New York Times'* vaunted Sunday magazine puzzle in ink. He gets great pleasure out of showing people things he has collected—including a classic Wurlitzer jukebox in his kitchen. (During a

tour of his apartment, Rosen opens the box to show its dinosaur-like vacuum tubes.) He came to golf late, at age 55, but still has a not-so-terrible 19 handicap. He's so committed to the game that four years ago he had both of his ailing knees replaced at once so he could limit the amount of time he'd be on the links.

Rosen's early family life wasn't so pleasant. His father, a dentist, plied his trade in the parlor of the family's New Orleans home. His parents, Isadore and Anna Rosen, divorced when he was eight and his mother made just \$20 a week as a secretary while raising three children on her own. She valued education and wanted to see her children get ahead. So, with help from a brother, she scraped together enough money to send Rosen to a top-notch private school. His mother and brother served as role models that helped him "always see the solutions, not the problems," says Rosen.

That's not to say he doesn't feel down from time to time. "He called me after he fired Eckhard and said it was the hardest day of his life," says sister Ruth Weisel. Rosen has been separated from his wife, Alexandra, for the past two years over something he's not willing to talk about. He doesn't share emotion easily. Outwardly, he's calm and analytical—even under stress. At the end of one torturous day at Compaq, he went back to his hotel room where he nervously munched his way through most of the candy in the minibar.

Early on, Rosen emulated big brother Harold. He followed him into engineering, and even worked with him briefly at Raytheon Co. in Southern California in the early 1950s. But Rosen changed lanes when he saw that he would only be a run-of-the-mill engineer. He had always been interested in business, so he went to Wall Street and established himself

Cover Story

Rosen thrives on intellectual stimulation, which is why he's constantly seeking out entrepreneurs

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a technology analyst—primarily at Morgan Stanley & Co.

Rosen's special insight was that he understood early that the calculators and digital watches made possible by semiconductor technology would soon grow up into more powerful machines. When the Apple II computer came out in 1977, he became a self-appointed evangelist for the potential of the PC—carrying one around on visits to Morgan Stanley clients and demonstrating to them that the machine was not a toy. "He was the first person on Wall Street who took PCs serious-

Cover Story

ly," says Mitchell Kapor, the Lotus founder.

Rosen had a knack for spotting opportunities because he was a gadget geek himself. He suffered the pain of carrying around the Apple II, so, five years later, he understood the attraction of the original "luggable" Compaq computer when Canion showed him a sketch drawn on the back of a diner place mat. He wrote his own financial calculation programs until PC spreadsheets came out. And, if something went wrong, he was on the phone with the company to give his critique. The first time Kapor met Rosen was in 1979, when Kapor and a partner published a basic graphics program and Rosen called him up looking for technical support.

Backing startups was a natural progression from Rosen's Wall Street perch—which he gave up in 1981 because it had become too routine. He teamed up with L.J. Sevin, a former chip company CEO whom Rosen met as an analyst covering his company, Mostek Corp. That year, they hung out their shingle. They had their share of spectacular failures—Osborne Computer, for example, the British maker of a non-IBM compatible PC that crashed and burned in 1982. But Rosen and Sevin are remembered for their hits: Lotus, Compaq, Ciena, Silicon Graphics, Citrix, and Electronic Arts. "He was great at sniffing out things that were going to happen—rather than already happened," says Sevin, who is retired.

Rosen wasn't just a great investor. He plunged in and helped his companies' CEOs out when needed. Canion, Compaq co-founder, remembers that it was Rosen who convinced computer dealers to carry Compaq as well as IBM.

But Rosen is best-known for being tough with CEOs, especially for the way he fired Canion. The company was threatened by cheap Asian imports, and the two disagreed on how to fix things. Canion planned on building his own lower-cost PCs. But Rosen believed Compaq needed to get into the market faster and should buy standard components from suppliers. To prove his case, he sent a small team of Compaq engineers to Comdex, the big computer trade show. They bought components at considerably lower cost than if Compaq had made the whole thing itself. At a fateful October board meeting, Rosen presented his findings and the board fired Canion, naming Pfeiffer to fill his shoes.

Canion was stung. He and Rosen didn't speak for years. But gradually their relationship became cordial again. And one month, they met in Compaq's executive offices—the first time Canion had been there since his ouster. Rosen gave Canion some advice about a business issue he was wrestling with. Looking back, Canion still disagrees with Rosen about the cost PC strategy. But he says Rosen was justified in firing him. "I was burned out. I needed to leave," says Canion. "He didn't have a strong sense of urgency."

Pfeiffer's ouster was an altogether different matter. Behind the scenes, Rosen and the board had been fretting over Pfeiffer's performance since last summer—and told him so. Sector Perkins says the board gave Pfeiffer two "C-minus" on his annual review for product-quality problems and his failure to develop a potential successor.

Last fall, Rosen suggested that Pfeiffer recruit some top executives and create an Office of the President. "Eckhard pulled back," says Perkins. Board members say Pfeiffer had isolated himself with his clique of Chief Financial Officer Earl McCallister, Senior Vice-President John Rose, and Human Resources

'I WAS AN ASSET... RATHER THAN A MEDDLER'

Benjamin M. Rosen has long been a strong force in the companies he invests in, largely due to his belief in an independent board chairman. Rosen is chairman of Compaq Computer Corp., where he is one of the 11 outside directors on the 12-person board. But he is criticized for being meddlesome by some people and for not acting soon enough by others. *BUSINESS WEEK* software editor Steve Hamm got Rosen's views.

Q: Why did you become a champion of the independent board of directors?

A: It came out of my venture-capital roots. In startups, the typical board is made up of the founder and CEO of the company and the investors who are the venture capitalists. They're owners of the company, and one of them is selected as chairman. As the company grows, some of the venture capitalists cycle off—and you bring in other outsiders with different skills. That's what happened with Compaq, with the exception

that I stayed on as chairman. The board is supposed to represent shareholders, to maximize long-term value, and to select and supervise management of the company.

Q: In many companies, the CEO is the chairman and a lot of the directors are insiders. Why did you do it differently?

A: It emerged because we, as the owners of the company, felt it was the right thing to do. The CEO should not be in charge of the group that's supervising the CEO. You need checks and balances.

Q: What's the boundary between the job of the CEO and the job of the nonexecutive chairman?

A: They're very different. The nonexecutive chairman is in charge of the board and keeps the closest liaison with the CEO. But it's not an operating role. It's not a management position.

Q: But at Compaq, you seem to have gone over the line. You asked Compaq

employees to do some research in 1991 that was instrumental in the board firing CEO Rod

A: When a company faces a crisis, the board has to react and decide. It's a short-term issue that will affect the life of the corporation. In this case, the board felt we were faced with a necessity to change the corporate strategy to meet a changing world where price became paramount in consumers' decisions. The only way we could be competitive was to radically change. The management disagreed. They felt the problems were technical. So I felt compelled to support the CEO in some tangible way. That's why I sought middle-level managers to help me document the case.

Q: Did you do anything like that in the board firing CEO Eckhard Pfeiffer?

A: No. We had been observing the company's problems over a two-year period. In three of the last four years, we

itsch—all now gone—causing resentment in the man-ranks. The three could not be reached for comment. In retrospect, it would have been better if we acted earlier," says Rosen. He faults himself for not pushing Compaq to harness the Internet. He really didn't focus on it until months ago. "We should have been on the leading edge."

When the axe fell, Rosen wasn't the sole instigator; however, his board members say they asked Rosen to call the meeting in New York on Apr. 15. "He doesn't bully the board to a point of view," says director Ken Roman, a former executive. The board voted unanimously to boot Pfeiffer, spending most of the six-hour session debating how to make the transition. They agreed that they'd search outside for a new CEO—and asked Rosen to fill in temporarily.

In his part, Pfeiffer doesn't believe he deserved to be ousted. He says he had nearly completed integration of Digital's

operations with Compaq. The 17,000-person work-force reduction was ahead of schedule. Sure, "there were bumps in the road," he concedes. The transition to direct selling was more slowly than he hoped. But, "overall, the transition was good," he

The CEO search is back on. There are one now that are out of the running. Former candidates like Oracle Corp., Sun Microsystems, and AT&T's John D. Ziegler are not interested. And Nor-

short of expectations, we took a significant hit in price. There were problems along the way. We had to wrestle with the timing of this. Was it the company, a market issue, an execution industry issue? In light of this, we made acquisitions, and we had to mask the under-

It wasn't until the first half of this year that we realized the problems we had been seeing were more fundamental than we had thought.

I was concerned that Compaq's independent board is going to have a lot of candidates?

by the quality of the people in this position, I'd say we know that this is not the case. We have preselected ourselves and our candidates tend to be serious. And it would take an inordinate amount of time to be put off by this.

People have said you're a survivor. What's your response?

tel Networks President David L. House, who was approached more recently, is lukewarm to the job, sources say. Rosen says he's not giving up the chairmanship in order to lure a new CEO, but director Roman says the board is open to letting the new leader be chairman as well as chief executive. "We want the best CEO for the business and we're willing to do whatever is necessary to get that CEO," he says.

CEO candidates might be interested to know that Rosen was no gentler about giving himself the boot. In 1993, he and his brother Harold started Rosen Motors to develop a hybrid car that would be powered by a gas turbine engine and an energy-saving flywheel. The prototype was highly fuel-efficient and gave off virtually no emissions. But the Rosens couldn't convince any of the major auto makers to back them, and in 1997, after Ben Rosen invested \$24 million of his own money, the brothers shut down the 70-person operation.

It was a sad day when Rosen Motors closed—but Rosen didn't go into mourning. It's

nothing like the way he feels about Compaq today. "I could fail with impunity with Rosen Motors. It was my money," he says. "But, with Compaq, failure is not an option. I'm responsible." And if Rosen finds a CEO, and Compaq comes around quickly, all the better. He can get back to savoring his single-malt Scotch collection and polishing up his golf game.

By Steve Hamm in New York with Ira Sager in New York and Peter Burrows in San Mateo, Calif.



ROSEN: "I never shirked my responsibility with Compaq"

A: It's not true. During good times, which has been most of the 16 years of Compaq's operations, I've been in a position of a normal board member of the company. I go to board meetings. I talk to the CEO. I help if he wants a customer visit or a speech. But I think if you talk to either of our previous CEOs—other than the times when we've had problems—they thought I was an asset to the program rather than a meddler.

Q: What about the people who say you haven't been watching close enough?

A: I never shirked my responsibility with Compaq. The board—when it makes a decision like this—has to make

significant problems and their boards took as long as six or seven years to address them. Somewhere between caprice and inaction is the optimum time to act. That's what we try to do. In retrospect, it would have been better if we acted earlier. But it's hard to know more than management tells you.

Q: Isn't it customary to give the CEO a chance to fix things? Pfeiffer has been saying he didn't have a chance to come up with a turnaround plan.

A: It was our judgment that the problems we had in the past couple of years were execution problems and others that required not fixing, but changing leadership.

COMMENTARY

By Mark Hyman

THE 'BABE FACTOR' IN WOMEN'S SOCCER

The sight of the pony-tailed heroines of the U.S. World Cup soccer team kicking their way to victory against China on July 10 was a thrilling and perhaps historic moment for women's sports. Women, I have it on good authority (namely, my wife), will always treasure the image of 90,145 fans in various stages of hysteria gathered for the title game at the Rose Bowl in Pasadena, Calif., to celebrate an exceptional group of female athletes. Speaking for the men, however, I can say confidently (if a bit sheepishly), the Kodak Moment of the day was the sight of Brandi Chastain—in all her muscular glory—doffing her shirt.

It's a simplification, for sure. But face it: Chastain's post-match celebration, in which she peeled off her jersey to reveal only a sports bra, grabbed more attention than any balletic corner kick in the U.S. victory over China. Chastain says it was spontaneous, and maybe it was. Certainly, the photo-op snagged the media-savvy Chastain tons of exposure—and assured the game a place on countless front pages.

"It's the Babe Factor," says Mary Jo Kane, a University of Minnesota professor and director of the Tucker Center for Research on Girls & Women in Sport. "My fear is that women will never be taken seriously as great athletes as long as we link being a female athlete with being sexy."

GAMES WOMEN PLAY. Herein lies the dark dilemma for women's sports. For many women athletes and promoters, the ultimate goal is to get what men have: a professional league of their own in every major sport and the lucrative TV deals, endorsements, and other benefits that go with them. But women will have a tough time getting there without extending their fan base to include millions of men.

So far, most guys have been, in a word, indifferent to the games women play. Have you checked out the crowd demographics at a Women's National Basketball Assn. game lately? Let's just say there's never a wait to use the men's room.



KODAK MOMENT

Male fans recall the sight of Brandi Chastain in her shirtless, muscular glory



Women's golf and tennis do much better among male spectators, but they're hardly top picks.

Not that this is news, but the last-thing lesson of the World Cup may be that a bit of sex appeal is what will make women's sports more, well, appealing. Chastain, as finely tuned an athlete as there is, seems to have made her peace with that—and she's cashing in: If you're a sports-bra maker, who do you want to pitch your wares?

There's no shame in promoting

athletes who look as good as—or better than—they play. When jut-jawed Mike Mussina pitches for the Baltimore Orioles, there always seems to be a few more female baseball

fans in Camden Yards, based upon my own personal unsentimental survey. And you can see how women respond when sports hunks such as Andre Agassi, Grant Hill, and Derek Jeter are playing.

Women's sports have more to sell to a male audience than cleavage. Anyone who

watched even a few minutes of the World Cup saw a U.S. team made up of highly skilled, disciplined players, who seemed to glide across the field, the ball never leaving their feet.

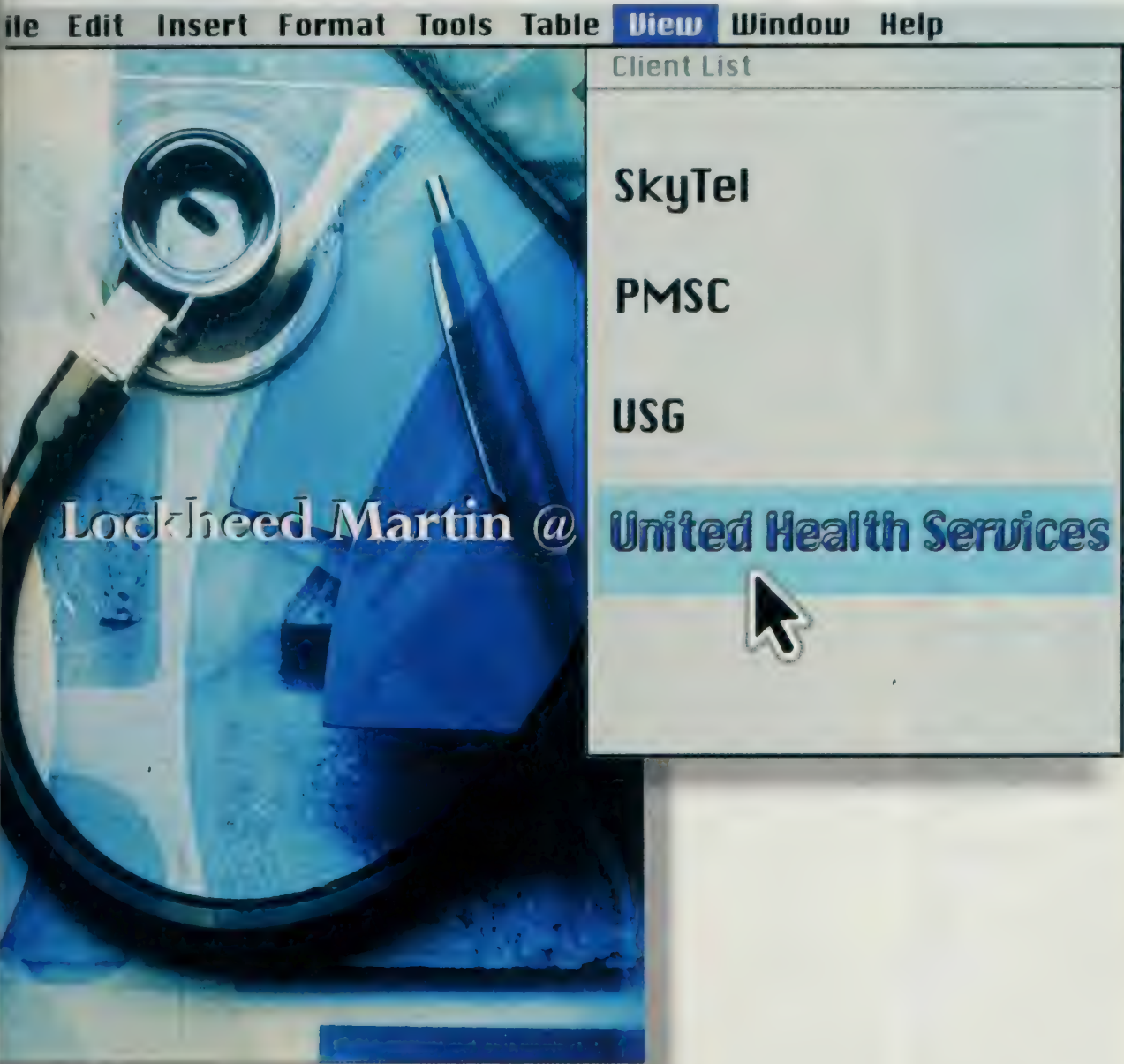
YOUNG MOMS. The World Cup team had another edge: players who are almost as much fun to follow on the field as they are on. The team roster includes everything from a college student

to thirtysomething mothers of toddlers. Mia Hamm became a heroine for millions of women and girls. Guys could gawk at discreet nude of Chastain in a men's magazine, adorned by just a pair of Nikes and a soccer ball.

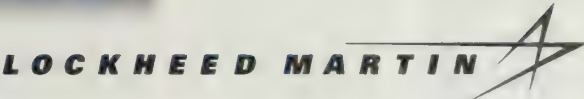
Now that women's soccer is here, it apparently isn't going away anytime soon. The U.S. team will be the odds-on favorite at the 2000 Summer Olympics Games in Sydney, and there is talk of a women's professional league as early as 2001. Thanks to Brandi Chastain, a lot of men are marking the date. Maybe by then, men will be able to focus on the extraordinary athletic talent on display rather than the babe factor. Then again...

Hyman is a contributing editor for sports business.

MISSION: You're going home. At United Health Services, that sound of success is heard more quickly these days. Now? A Lockheed Martin network that's turning paper systems into digital systems. The result: medical data that appears when it's needed, where it's needed: at bedside, in the lab, or viewed by physicians in several locations at once.



The screenshot shows a web application with a menu bar at the top containing: File, Edit, Insert, Format, Tools, Table, **View**, Window, Help. Below the menu bar is a section titled "Client List". Under "Client List", there are three entries: SkyTel, PMSC, and USG. At the bottom of the "Client List" section is a blue horizontal bar with the text "United Health Services" in white. A mouse cursor is pointing at this bar. Overlaid on the left side of the screenshot is the text "Lockheed Martin @".



SUCCESS: What's behind better patient care? The Lockheed Martin enterprise network lets physicians see what other physicians have done. When used with laptops, these networks provide mobile access to information that is fast, accurate, and secure. To see what Lockheed Martin IT expertise can do for you, visit www.lockheedmartin.com.

**EARLY
DETECTION IS
STILL THE
BEST DEFENSE**

BusinessWeek Lifestyle

New Weapons Against A Killer

Colon cancer treatments have taken a big step forward

BY KATE MURPHY

Elaine Caldwell has a physical exam every year but has never been screened for colon cancer. "They give you that little home-testing kit as you're walking out the door like it's no big deal. I never get around to it," says the 62-year-old real estate agent in Houston. Unfortunately, Caldwell is not alone. Unlike tests for breast and prostate cancer, colon-cancer screenings often get shrugged off—with fatal results. The American Cancer Society says 50,000 people will die of the cancer this year, despite a 92% survival rate when the disease is detected early.

Fortunately, the fight against colon cancer is gaining on several fronts. For the first time in 40 years, new drugs promise to improve survival rates as well as patients' quality of life (table). A wider range of screening options is also helping people detect the disease. And prevention is coming to the forefront of research, including initial studies on the effectiveness of aspirin, nonsteroidal anti-inflammatory drugs, and Cox-2 drugs used for arthritis in curbing the disease.

Among drugs, the standard chemotherapy



Colon Cancer Drugs

DRUG/MAKER	DESCRIPTION	REGULATORY STATUS
CAMPTOSAR Pharmacia & Upjohn	Injectable "second-line" treatment after standard injectable 5-FU chemotherapy has failed; eventually may be used with 5-FU as first-line treatment	Has FDA approval
ORZEL Bristol-Myers Squibb	Oral 5-FU; studies show that it is as effective as intravenous versions	Seeking FDA approval use in colon cancer
OXALIPLATIN Eli Lilly/Sanofi	May become a primary treatment given intravenously; shown by studies to work well with 5-FU	To be submitted for FDA approval this year
XELODA Hoffman LaRoche	Oral 5-FU; also shown to be as effective as injectable 5-FU	Has FDA approval for breast cancer; seeking the nod for colon cancer

DATA: BUSINESS WEEK

ent, fluorouracil (known as 5-FU), suddenly slew of potential partners. The Food & Administration approved Camptosar by Teia & Upjohn last October as a second-attempt to be given when 5-FU fails. Studies show that Camptosar, which, like 5-FU, is administered intravenously, prolongs lives as well as such symptoms as fatigue, abdominal pain, constipation, by curbing an enzyme that tumor cells need to replicate.

Camptosar is causing excitement for another reason: It may work better than 5-FU, which interferes with tumors' metabolism. Subjects treated with the combination "had a more than 50% response rate, compared with 29% of those who received the usual 5-FU preparation," says Dr. David Saltz of Memorial Sloan-Kettering Cancer Center in New York, who led a nearly two-year study involving 669 patients. His findings indicate that this combination chemotherapy may become a first-line treatment.

EFFECTS. Another promising compound is irinotecan, a platinum-based drug that a venetian Eli Lilly and Sanofi Pharmaceuticals is to submit for FDA approval this year. The drug is orally administered, which causes fewer side effects than 5-FU. Like most chemotherapies, irinotecan can harm normal cells, causing side effects such as a weakened immune system and nausea.

Patients can take heart as well from the prospect of dispensing with

screenings because symptoms often appear only when the cancer is at an advanced stage. The American Cancer Society, National Cancer Institute, and Centers for Disease Control recommend that anyone over 50 be tested regularly and will mount a campaign next year to raise public awareness.

Doctors disagree about which exam is best and most cost-effective, however. Insurers also

differ on which they cover. "It's up to each individual," says Dr. Gabriel Feldman of the American Cancer Society.

If you have a family history of the cancer, your doctor may devise a regimen that calls for frequent exams.

The simplest and least invasive method is an annual fecal occult test, which costs \$10 and can be done at home. A sigmoidoscopy (\$150), in which a doctor uses a periscope-like device to check the lower colon, needs to be done only every five years. Another alternative is a barium enema, a \$300 procedure that needs to be done only once a decade. The colon is filled with barium so that any growths will be easier to see in an X-ray. Like a barium enema, a colonoscopy can be done once every 10 years. In this exam, which calls for sedation, a doctor explores the colon with a camera that also has retractable blades. Any polyp found can be removed immediately—as is not the case with other methods. Costs start at \$600 to \$800 but can go as high as \$1,400.

Screening soon may become less invasive, thanks to "virtual colonoscopy," which uses computed tomography (CT). In the technique developed at Wake Forest University Baptist Medical Center in Winston-Salem, N.C., a CT scan of the pelvis and abdomen is transformed into a 3-D view of the inside of the colon and rectum. Hundreds of hospitals are trying out the procedure, which costs around \$1,400 and is not yet covered by insurance as a screening tool. "It takes 10 minutes and has an accuracy rate of 90% or better," says Wake Forest radiologist

David Vining, who holds a patent on the process. In any case, the first step—taking the test—is still up to you. It takes little effort to keep yourself from becoming a colon cancer statistic. □

Prevention

Colon Cancer Resources

**AMERICAN
CANCER SOCIETY**
800 ACS-2345;
www.cancer.org

**AMERICAN
GASTROENTERO-
LOGICAL ASSN.**
800 698-1742;
[www.gastro.org/
digestinfo.html](http://www.gastro.org/digestinfo.html)

**NATIONAL
CANCER
INSTITUTE**
800 4-CANCER;
www.nci.nih.gov/
and
[http://cancernet.nci.
nih.gov/pdq.htm](http://cancernet.nci.nih.gov/pdq.htm)
(for clinical trial info)

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[www.oncolink.
upenn.edu/](http://www.oncolink.upenn.edu/)

venous (IV) devices, at least one of their treatment. In the future, there are oral 5-FU formulations. Bristol-Myers Squibb's oral formulation of breast cancer drug Xeloda is seeking to expand its use. Bristol-Myers Squibb's oral formulation of breast cancer drug Xeloda is seeking to expand its use. Bristol-Myers Squibb's oral formulation of breast cancer drug Xeloda is seeking to expand its use.

Despite the drug advances, early detection is your best chance for survival. With this in mind, early diagnosis is rare without regular

Healthy Habits

► Consume 0.45 mg of folic acid and 1,200 mg of calcium daily. Get these from green, leafy vegetables and low-fat dairy products. Or take dietary supplements.

► Cut back on red and processed meat. Research suggests that more than one serving a day increases the chance of getting the disease.

► Exercise. It "probably has a larger impact than any dietary factor," says María Elena Martínez at the University of Arizona Health Sciences Center in Tucson.

Gone Fishin' —With High Tech

This space-age gear is sure to send anglers reeling

BY KATE MURPHY

You know it's down there. You've seen it jump and felt it nudge your line. But you can't get it to strike at your bait. What's that darn fish up to? Wouldn't it be great if you could drop a waterproof video camera overboard and find out? Well, you can.

Just plug in your Aqua-Vu Video System and watch as it transmits a signal from as deep as 50 feet to a monitor aboard ship. With this \$749 system, you can "watch your lure and see how to alter your jigging action so that it attracts a fish's interest," says Steve Quinn, editor of *In-Fisherman* magazine. Underwater video is only one of many new kinds of high-tech tackle. Fresh- and salt-water anglers can now turn to an array of electronics, space-age materials, precision manufacturing, and satellites to gain an edge (table).

Technology is certainly helpful in finding where the fish are running. Today's sonar systems, known as fish finders, are no longer the crude devices of five years ago that routinely mistook trash for fish. Newer versions by such makers as Lowrance, Eagle, and Humminbird paint a detailed picture of schools in motion on high-definition screens.

If you want to mark a hot fishing spot, lock it into a global positioning system. Available in handheld and boat-mounted models, these gadgets use satellite signals

to plot your coordinates anywhere on earth. "They are incredibly useful in foggy conditions or if you just have a really poor sense of direction," says Quinn. Some positioning systems, such as Lowrance's GlobalMap, come with mapping software to show your movement in relation to marinas, buoys, and shorelines. They'll even direct you to underwater wrecks and reefs where fish are likely to congregate.

No matter what high-tech gadgetry you have in your tackle box, you're still going to need a good rod. The latest ones, whether intended for conventional fishing, are made of lightweight high-density graphite and resins that are virtually indestructible. Indeed, Fenwick's new Techna AV rod is made of graphite mixed with the same polymer used in bulletproof vests. These rods give you an easy, crisp cast and strong resistance against flailing fish. Rods that run the line through the shaft rather than leads on the bottom represent another advance. The design eliminates the stress points, tangles, and wire interference inherent in bottom-mounted guides. Models include Cabela's Depthmaster Lite (\$60) and Daiwa's Interline (\$75-\$130).

In the reel world, high-end rods from makers as Abu Garcia and Shimano are crafted out of single blocks of aircraft-grade aluminum with corrosion-resistant titanium and brass linings. Cranks (on fly, casting, and spinning reels) turn with astonishing ease even when you've hooked a 100-pound thrasher. If you want to know how far you've cast your line and how deep it has sunk, some reels feature digital counters with built-in timers that tell how long you've been fishing at a particular depth.

Incredibly lifelike lures adorned with iridescent patterns and holograms, make it more likely fish will bite. Pradco's new Swim'n Image lures actually twitch and dive in the

water like three-inch threadfin shad (the equivalent of a chocolate chip cookie to a largemouth bass). Fish experts at Pure Fishing in St. Louis, Iowa, have infused rubber worms and other creepy-crawlies with flavors fish can't resist. "We've come up with species-specific seasonings," says John Prochnow, a chemist and product-development manager at Pure Fishing. As Berkley PowerBait and Sqwormers, the imitations appeal to trout, redbait, walleye, snook. And once you get home, be sure to take advantage of technology in another way: posting your fish story on the Net.



Technotackle for Modern Anglers

PRODUCT	PRICE	DESCRIPTION
FENWICK TECHN A V	\$230-\$250	Graphite and resin rod
LOWRANCE X85	\$484	High-definition fish finder
MAGELLAN BLAZER 12	\$120	Handheld GPS system
PRADCO SWIM'N IMAGE	\$6-\$8	Lures that twitch and dive
SHIMANO CALCUTTA	\$170-\$255	Corrosion-resistant aluminium reel
WALKER DOWNRIGGERS STRIKE-VISION	\$1,000	Underwater video camera

The Fidelity American Express® Gold Card. Only Fidelity customers enjoy these benefits: \$75 annual fee compliments of Fidelity. Gold Card purchases debited to your account. One convenient statement. Plus virtually all the benefits you'd expect from American Express. The Fidelity Ultra Service Account® helps you take command of your personal finances: Trade stocks and invest in mutual funds. Pay bills online. Access your account anytime, day or night. Find out more. Hit fidelity.com.

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ON US*

FIDELITY.COM ... EVERY SECOND COUNTS ...
ONLINE INVESTING

Fidelity Investments
WHERE 16 MILLION INVESTORS PUT THEIR TRUST®

Cards

*Fee is paid by Fidelity as long as you maintain your Ultra Service Account. Fidelity account must have at least \$30,000 when you request the Card; independent Gold Card qualification conducted by American Express. Minimum of \$30,000 in cash or securities in your Ultra Service Account required for cash management features. Visit fidelity.com or call 1-800-FIDELITY for an enrollment kit for complete details.

Availability and response time may be subject to market conditions. Fidelity Brokerage Services, Inc. Member NYSE, SIPC.

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A NEW
MIDYEAR
MUTUAL FUND
UPDATE

BusinessWeek Investor



Grading the Funds: New Names on the A-list

Low-risk portfolios are moving to the front of the class

BY JEFFREY M. LADERMAN

Any day now, Fidelity Magellan will become the first mutual fund to cross the \$100 billion mark, just four years after its assets hit \$50 billion and long after many had written it off as a bumbling giant. But in BUSINESS WEEK's mutual fund performance ratings, Magellan rates just a B when compared with the general universe of funds. And it gets a C-, a below average grade, in its peer group of large-cap blend funds.

To find higher rated funds, turn to BUSINESS WEEK's Mutual Fund Scoreboard. Appearing every January in the magazine, the ratings get updated monthly in the Interactive Mutual Fund

Scoreboard at Business Week Online (www.businessweek.com/investor/, then click Mutual Funds). In the six months since our ratings ran in the magazine, domestic hybrid funds composed of stocks, bonds, and cash outperformed many equity offerings such as Magellan on a risk-adjusted basis. They also did their own against the Standard & Poor's 500 index funds when adjusted for risk.

Mutual funds

The first half of 1999 was a lot like the past few years when the major stock market indexes continued to reach new highs. But this year, U.S. diversified mutual funds are faring relatively poorly. They lagged behind the Standard & Poor's stock index by only 1.23 percentage points,

Small-caps and international funds are doing better—but they still have a long way to go to catch up

to mid-cap and even small-cap issues—shifts that have helped to bolster fund returns. Even so, the sorts of funds that earned superior ratings for overall performance have not changed dramatically. Nor has much improved performance from many international funds allowed any of them to approach an A rating, our highest. Still, 33 funds have joined the top ranks this year (table). Among the new stars are large-cap growth funds including Gabelli Growth (page 128), Pioneer Growth A, and Reynolds Blue Chip Growth. Seventy-six equity funds that were on the 104-fund list at yearend remain there, and 56 funds have been on the list every month in 1999.

BOND FUND BLUES. While equity funds have thrived in the first half, bond funds haven't. Rising interest rates took their toll, leaving taxable-bond funds down 0.3%, and muni funds off 1.35%. Still, the list of A-rated bond funds hasn't changed much since yearend. Sixty-one of the 98 funds that were on the list at the end of 1998 remain on it now; 46 have been on the list every month. This year, 29 funds have joined the bond funds' top ranks (table, page 126). Four are convertible bond funds—no surprise, since their fortunes are more closely linked to the performance

with more than six points in the first half. That's because a broader swath of stocks participating in the market's rise. In the quarter, investors began to favor value over stocks, and to step away from large-caps

main on it now; 46 have been on the list every month. This year, 29 funds have joined the bond funds' top ranks (table, page 126). Four are convertible bond funds—no surprise, since their fortunes are more closely linked to the performance

New A-Rated Equity Funds

When it comes to sizing up mutual funds, BUSINESS WEEK has plenty of experience. Our fund ratings (A through F) have appeared every January since 1986 and have been updated monthly since Jan., 1998, in the Mutual Fund Corner of our Web site (www.businessweek.com/investor/). Below, you'll find the funds that joined our A-list this year. Ratings are based on five-year risk-adjusted total returns.

	FIVE-YR. AVG. ANNUAL RETURN*	FUND	FIVE-YR. AVG. ANNUAL RETURN*	FUND	FIVE-YR. AVG. ANNUAL RETURN*
AMERICAN BALANCED	16.8%	GABELLI GROWTH	29.4%	RAINIER BALANCED	19.1%
AMERICAN MUTUAL	19.8	JANUS TWENTY	36.7	REYNOLDS BLUE CHIP GROWTH	34.3
AMERICAN GLOBAL INVESTOR LIFEPATH 2010	14.3	MAS BALANCED PORTFOLIO INST.	17.8	SALOMON BROTHERS INVESTORS O	25.1
AMERICAN INVESTMENT LIFECYCLE SHORT RANGE	10.1	MENTOR CAPITAL GROWTH A	26.0	SEI INST. BALANCED A	16.3
AMERICAN & COX BALANCED	17.3	MFS TOTAL RETURN A	15.6	SMITH BARNEY CONCERT SOCIAL A	18.9
AMERICAN CONTRARIAN BALANCED	16.7	MFS UTILITIES B	21.5	STAGECOACH EQUITY INDEX A	26.6
AMERICAN DIVERSIFIED STOCK & BOND A	16.1	MONTGOMERY U.S. ASSET ALLOCATION R	19.9	STAGECOACH LIFEPATH OPPORTUNITY A	9.0
AMERICAN EQUITY SELECT UTILITIES GROWTH	26.4	NATIONS ASSET ALLOCATION A	18.8	U.S. GLOBAL INV. ALL AMERICAN EQUITY	24.5
AMERICAN EQUITY UTILITIES	22.8	ONE GROUP BALANCED B	16.0	UAM SAMI PREFERRED STOCK INCOME	6.3
AMERICAN FUND FOR GROWTH A	21.7	PIONEER GROWTH A	33.1	VICTORY BALANCED A	17.1
AMERICAN FUND FOR LI ASSET	22.4	T. ROWE PRICE BALANCED	16.5	WEITZ HICKORY	32.8

*As of June 30. Appreciation plus reinvestment of dividends and capital gains before taxes

DATA: MORNINGSIDE INVESTMENT

of equities than to the course of interest rates. All told, five convertible funds—or 25% of the convertible funds that have ratings—reside on the A-list. A strong stock market has not yet made much difference in ratings of high-yield bond funds, whose less-than-investment-grade holdings also tend to trade more in sync with

104 slots. Hybrids have done well even in the face of rising rates that have put pressure on their bond portfolios. That's partly because the rating periods have moved forward from December, the first half of 1994—one of the worst periods for bond investors in decades—to the first half of 1993, when rates had dropped off their records.

New A-Rated Bond Funds

BUSINESS WEEK rates bond funds, too. The following bond funds have joined the A-list this year. Ratings are based on five-year risk-adjusted total returns.

FUND	FIVE-YR. AVG. ANNUAL RETURN*	FUND	FIVE-YR. AVG. ANNUAL RETURN*
ALLIANCE MUNICIPAL INCOME II VIRGINIA B	17.8%	PAINWEBBER MUNICIPAL HIGH-INCOME A	6.9%
GALAMOS CONVERTIBLE A	17.3	PILGRIM CONVERTIBLE C	18.7
DAVIS CONVERTIBLE SECURITIES A	18.1	T. ROWE PRICE SUMMIT MUNICIPAL INTERMEDIATE	6.2
DREYFUS BASIC INTERMEDIATE MUNICIPAL	6.5	SCHWAB CALIF. SHORT/INTERMEDIATE TAX-FREE	4.8
DREYFUS SHORT-TERM INCOME	6.7	SCUDDER LIMITED-TERM TAX-FREE	4.7
DUPREE KENTUCKY TAX-FREE INCOME	6.3	SCUDDER MASS. LIMITED-TERM TAX-FREE	4.7
FEDERATED LIMITED TERM MUNICIPAL A	4.2	SOUTH DAKOTA TAX-FREE	5.5
FIRST INVESTORS FUND FOR INCOME A	10.4	STRONG SHORT-TERM BOND	6.6
FRANKLIN CALIF. INTERMEDIATE TAX-FREE	6.6	STRONG SHORT-TERM GLOBAL BOND	7.6
FRANKLIN FEDERAL TAX-FREE INCOME A	6.6	STRONG SHORT-TERM MUNICIPAL BOND	4.5
INTRUST KANSAS TAX-EXEMPT BOND INSTL.	6.6	THORNBURG NEW MEXICO INTERMEDIATE MUNI. A	5.3
MAS LIMITED DURATION INSTITUTIONAL	6.0	USAA SHORT-TERM BOND	6.5
MONETTA INTERMEDIATE BOND	8.0	VANGUARD CALIF. INSURED INTRM. TAX-EXEMPT	6.2
MONTEREY PIA SHORT TERM GOVERNMENT	6.3	VANGUARD PREFERRED STOCK	9.9
NORTHERN INCOME EQUITY	14.9		

*Through June 30. Appreciation plus reinvestment of dividends and capital gains before taxes
DATA: MORNINGSTAR INC., BW

stocks than bonds. Seven high-yield funds that made the A-list in December are on it now and all but one are the same.

Even when bond funds do well, they get scant attention from investors. In part, that's because yield is what sells bond funds, and for the last few years yields have been relatively low. In fact, only high-yield funds have taken in much new cash recently. Many investors also shun fixed-income funds because they already own a slug of bonds in their domestic hybrid funds.

GOOD BALANCE. Hybrid funds are a broad category that includes balanced and asset-allocation funds. Their portfolios dampen volatility and give investors one package offering the advantages of stocks, bonds, and sometimes, other assets. Often used as starter funds, they're popular in 401(k) and individual retirement accounts. The balancing act works—investors get a high degree of reward for the amount of risk. Thus, domestic hybrid funds have always been well represented in our Mutual Fund Scoreboard.

Today, 41 domestic hybrids make the 111-name A-list—37% of the total. For the period ended last Dec. 31, such funds occupied 30 of the

Even as value investing came back in the second quarter, only a dozen large-cap value funds made it to the A-list, three fewer than last year. Five funds dropped off; two new ones, American Mutual Fund and Salomon Brothers Investor Fund, came aboard. American Mutual, run by the Fidelity Group, is an \$11 billion giant with a 19.8% year return over the last five years. The Salomon fund has higher returns, 25.1% for the same period, but the no-load shares are close to new investors. Newcomers have to buy the fund with a load.

Large-cap blend funds, which span the middle ground between value and growth, also made ground in the first half, placing 33 funds on the A-list, vs. 36 at the end of last year. Eleven funds in this category are S&P 500 index funds, leaving just 22 actively managed portfolios. Large-cap growth funds, which have posted strong returns over the last five years, put names on the A-list, the same as in December.

Considering the pickup in the mid-cap and small-cap sectors, most funds in those categories remain far from the A-list. At the end of the year, the only small-cap funds to rise to the

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Hybrid funds, built to lower risk and combine the advantages of stocks and bonds, have prospered despite rising rates

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Longleaf Partners Small-Cap and Royce Total Return, both value portfolios. Now, the fund is gone from the all-fund A-list, but retains an A rating in its category. In it comes a new star from the small-cap blend: Weitz Hickory Fund, with a smashing 1-year return over the last five years. More than twice the average annual return of the average fund in its category. Fortunately, the fund is closed to new investors, as is Longleaf. For alternatives, look to the small-cap funds rated A in their category: Royce Total Return in value, the Fas-

ciano or Value Line Special Situations funds in growth, and Meridian Value fund in small-cap blend. Mid-caps are not making any more headway than small caps. The mid-caps placed five funds on the A-list, same as last winter, and only one name is new, Gabelli Asset Fund.

HIGH-POWERED UTILITIES. Among the specialty funds, some staid utilities funds have jumped to the A-list. They grabbed four slots, compared with none last year. Their low volatility helped them significantly in the overall ratings. Of 35 rated utilities funds with ratings, 22 earned a B or better. The runaway winner was Fidelity Se-

WHERE 4.9% MAKES YOU A STAR

Templeton's J. Mark Mobius, the dean of emerging market investors, dashes around in a private jet, inspecting factories and grilling managers. Joshua Feuerman, head portfolio manager for SSgA Emerging Markets Fund, is a less ebullient flier. When he touches down, he talks to pols and central bankers. He visits companies? Why bother? "In emerging markets, returns are driven by the countries in which you invest, not the companies," says Feuerman. "When markets collapse, it doesn't matter which stocks you own." He takes a different approach, to be sure—but it allows the fund to earn a well-known \$325 million in Emerging Markets funds and to stand out. For the years ended June 30, the fund earned an average annual total return of 33.1%, vs. 4.6% for the S&P 500. Templeton Developing Markets I, a fund that has all its share classes scaled down to nearly 10% of SSgA's size, has either return sounds good until you consider the average diversified emerging-market fund lost 10% a year during the same period. Even with its impressive results, when compared with all equity funds, SSgA, like Templeton Developing Markets, gets an F when judged against emerging-markets funds. SSgA gets an A, vs. Templeton's B+.

Feuerman credits his fund's relative success to a strict investment discipline. The fund holds 350 to 400 stocks, and benchmarks its portfolio against the 30-country investable index run by the World Bank's International Finance Corp. "We don't make any big bets," says Feuerman, who runs the fund with three associates. "We make lots of little ones." Since inception, the fund has beat the IFC

index decisively, with a 3% average annual return to the index's -3.7%.

Relative to the weights individual countries have in the index, Feuerman is now overemphasizing Israel, South Korea, Mexico, and Egypt. SSgA's managers use quantitative methods to sift through financial and economic data to identify promising markets. After that, they screen for stocks using criteria such as price-earnings and price-to-book value ratios. "We're always asking if there is something happening in that region that's not captured by the numbers,"

MASTER OF DISCIPLINE:

Josh Feuerman's rigor has kept SSgA in the black



SSgA Emerging Markets

VITAL STATISTICS

TICKER SYMBOL SSEMXX
ASSETS \$325 million
CATEGORY Diversified emerging markets
EXPENSE RATIO 1.25%
TOP HOLDINGS Telefonos de Mexico, Samsung Electronics, National Bank of Greece

TOTAL RETURN*

YEAR TO DATE 33.1%
12-MONTH 27.1
3-YEAR AVG. ANNUAL 0.4
5-YEAR AVG. ANNUAL 4.9

BW RATING

OVERALL F
CATEGORY A

*Through June 30. Multiyear returns are average annual. DATA: MORNINGSTAR, INC., BUSINESSWEEK

says Feuerman. The fund overweighted Israel and Egypt more than a year ago, and renewed prospects for Mideast peace, he says, make investment prospects that much better.

By sticking close to an index, the fund minimizes turnover. That's critical to keeping expenses down. The fund has no load and a 1.25% expense ratio compared to the 2% category average.

You could get even lower costs in an index fund, like Vanguard Emerging Markets Stock Index Fund. But that fund earns a C vs. its peers, while with SSgA you'll get an A.

Jeffrey M. Laderman

lect Utilities Growth, which earned a 26.4% a year return, vs. 17.3% for the average utilities fund. The fund places a far greater emphasis on lower yielding, but higher growth, telecoms than on electric and gas utilities, which feature higher yields but lower growth.

Technology funds, meanwhile, had the highest returns of any category over the last five years. But not one of the 16 funds with ratings made the A-list. Five funds earn Cs overall, the best that any did. In the category ratings, Invesco Technology II was the only one to get an A.

Investors wanting a jump on tomorrow's lead-

ing funds might consider buying relatively funds in down-and-out sectors with impro prospects. One possible choice: SSGA Eme Markets Fund (page 127). Like many vol emerging market funds, it rates an F comp with all other funds. But it alone gets an A graded against its peers. As for highflying la net funds, none have yet earned ratings—the too new. Even with their huge recent ret don't be surprised if some fall short of the when they become eligible to be rated. Wh comes to ratings, it's not only what a fund e but also how much risk it takes.

THE VALUE OF FOCUSING ON GROWTH

Even for a fund that buys large-cap growth stocks, beating the Standard & Poor's 500 stock index is no layup. Over the last five years, only about one in four large-cap growth funds have done it. The \$2.3 billion Gabelli Growth Fund, with a 29.4% average annual total return, is one of them.

BUSINESS WEEK gives the fund two As, showing it's a top performer when compared with all equity funds and when compared with

ANTI-RISK: *Gabelli's Howard Ward unloads stocks he sees as overvalued*

its peer group.

IBM, Texas Instruments, and Cisco Systems are the fund's largest holdings. That's not too different from what you'd find in competing funds. What portfolio manager Howard F. Ward brings to his shareholders is an attention to valuation that others lack. "My system will force me to sell stocks if they get too richly priced," says the 43-year-old manager, who took charge of the fund 4½ years ago.

That's what happened this spring, when Ward sold a longtime holding in Charles Schwab. He had major gains on the stock when the market started to trade Schwab like a speculative In-

ternet issue. He sold at \$95, only to see the stock run up to \$150 before coming down. "Sure, I would have liked to have sold it at a higher price, but I still made five times my money," says Ward. The stock now trades at \$53, after adjusting for a 2-for-1 split on July 1.



A stock doesn't have to reach Internet-style valuations for Ward to sell. He has also unloaded big consumer growth stocks such as Coca-Cola, Gillette, and Procter & Gamble, which are staples in many of his competitors' funds. He reasons that earnings growth rates have come down considerably, but price-earnings ratios have not. That leaves the stocks over-

valued and vulnerable to earnings disappointments.

As a large-cap manager, Ward had the wind at his back for a long time, and knows it can change direction. But he does not plan to switch investment styles if large-cap growth stocks fall out of favor. "We'll just

tough it out," says Ward. Since growth stocks can be volatile, Ward tries to cut risk by not allowing any sector to exceed 25% of the fund's holdings. That rule, though, is a little squishy. "If you count telecoms and service companies like En as technology, it goes up to nearly 60%," Ward admits. "But the information economy is where the growth is."

Still, Ward's attention to risk wins praise. "This is one of the few big growth funds that has any risk

controls," says Eric Kobren of Kobren Insight Group, which runs funds that invest in other mutual funds. "Howard practices 'growth at a reasonable price' rather than 'growth at any price.'" Even if Ward occasionally leaves some money on the table, shareholders don't seem to mind as long as he puts plenty in their pockets.

Jeffrey M. Laderman

Gabelli Growth

VITAL STATISTICS

TICKER SYMBOL	GABGX
ASSETS	\$2.3 billion
CATEGORY	Large-cap growth
EXPENSE RATIO	1.41%
TOP HOLDINGS	IBM, Texas Instruments, Cisco Systems
TOTAL RETURN*	
YEAR TO DATE	16.9%
12-MONTH	30.2
3-YEAR AVG. ANNUAL	33.0
5-YEAR AVG. ANNUAL	29.4

BW RATING

OVERALL	A
CATEGORY	A

*Through June 30. Multiyear returns are average annual returns

DATA: MORNINGSTAR INC., BUSINESS WEEK

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NET BANKING IS HERE, BUT HAS IT ARRIVED?



BY ROBERT BARKER

Is there a task more tedious than paying bills and balancing a checkbook? I can't think of one, and I suspect I'm not alone. At home, the job somehow gets passed between my wife and me every year or two. That's why I've been eager to give Internet banking a try. If it saves time the way online investing does, then I'd chuck our credit union, whose office, come to think of it, I haven't entered in more than two years.

I set out to test two leading Internet banks, Net.B@nk of Alpharetta, Ga., and Telebank of Arlington, Va. While many big, traditional banks such as Wells Fargo and Citibank also offer Net service, I wanted to try out the new breed. One

groups—Yahoo! users, for one. I applied at each bank within 40 minutes, but then I was confused over what I should do next with money? Wait to be contacted?

I picked up the phone and got clear directions from both on how to make initial deposits. That day, Net.B@nk sent an E-mail confirming my application. "Soon," it said, "you'll have everything you need to start NetBanking." So. Both banks were slow, but Net.B@nk was especially (table). More than a month passed before I received my ATM/Visa check card. "We ran out of the stock of ATM cards," Net.B@nk CEO D. R. Grimes told me, blaming fast growth. Accounts, which numbered 17,000 in December, grew by 10,000 over March and April alone.

GOOD IDEA, BUT... More dismaying was that the banks expected me to know to apply separately by phone or fax to begin paying bills online. Finally, I paid ten bills to a variety of vendors, which reached their destinations in a few days but

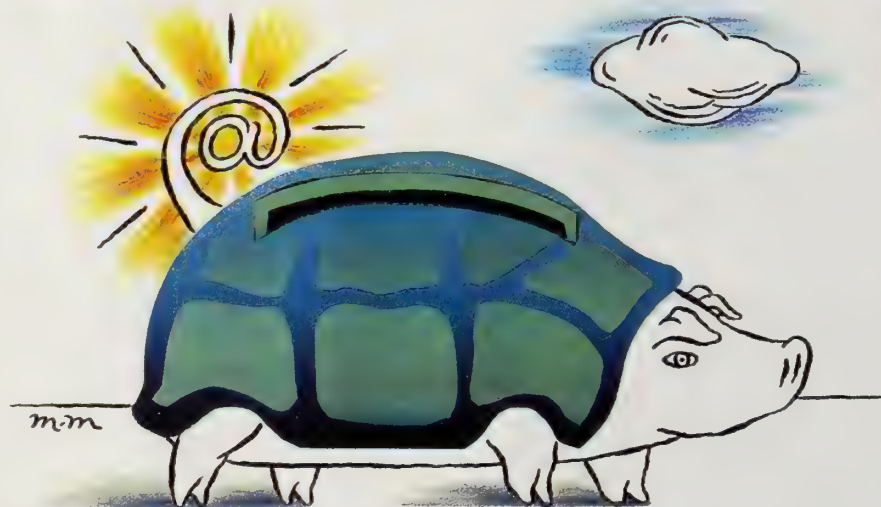
an \$86.93 payment that I made via Net.B@nk on June 22. AT&T didn't get it until July 6. I'm sure who's to blame—the bank or AT&T. The Net delays and service problems eroded the bank's "ways available" vow. In spite of that, each payment made me think how this could be.

That feeling soon faded. I discovered the bank had twice debited my register—the online record of my checkbook—without record—for several months. And ATM withdrawal fees: \$217.27 I paid Discover June 25, for example.

debited a second time June 30. Telebank has a bug—since fixed, I'm told—in new software installed June 16. It assured me that on my register, not the actual funds in my account, had been debited twice. It gave me a nine-step set of instructions to correct each extra debit, but for lots of typing and toggling back and forth from my E-mail to Telebank's Web site about tedious.

With this and other problems, the customer service people taking my calls at both banks proved courteous, informed, and anxious to help. And when—duh—I forgot to endorse a check for deposit, Telebank paid to return the check via FedEx so I could fix my error fast. All in all, Internet banking struck me as so promising I'd love to keep it up and suggest that you try it too. But with all the confusion, bugs, and delays, I can't recommend it, not yet.

To find barker.online, you should visit www.businessweek.com/investor/ or to AOL Keyword: BW Daily.



My Online Banking Experience

DAYS IT TOOK TO:	NET.B@NK	TELEBANK
See initial deposit credited	8	5
Get online account access	19	17
Get printed checks	34	15
Get ATM/check card	35	28
Be able to pay bills online	29	22

reason is that without the costly burden of branches, these banks can pay more interest. Net.B@nk pays at least 3% on no-fee checking accounts, for example, while Citi pays just 1%—same as my credit union.

Sadly, I'll have to tolerate that 1% a bit longer. I tested just two of the many Net

banks now operating, but they both proved too confusing and unreliable for me to give up the foolproof status quo as yet. "Internet banking is still in its infancy," concedes Laurence Greenberg, Telebank's executive vice-president of marketing.

Just how true that is I learned only after my test began on May 19. I searched Yahoo! and first went to Telebank, whose hot stock had caught my eye. So had Net.B@nk's, but Telebank also had an offer to rebate some automated teller machine fees to members of affinity

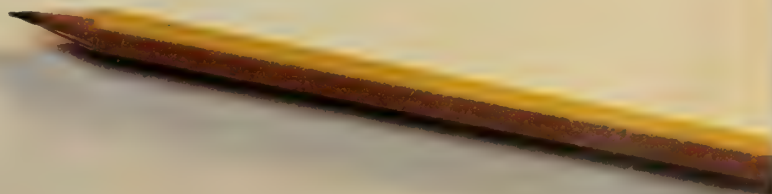
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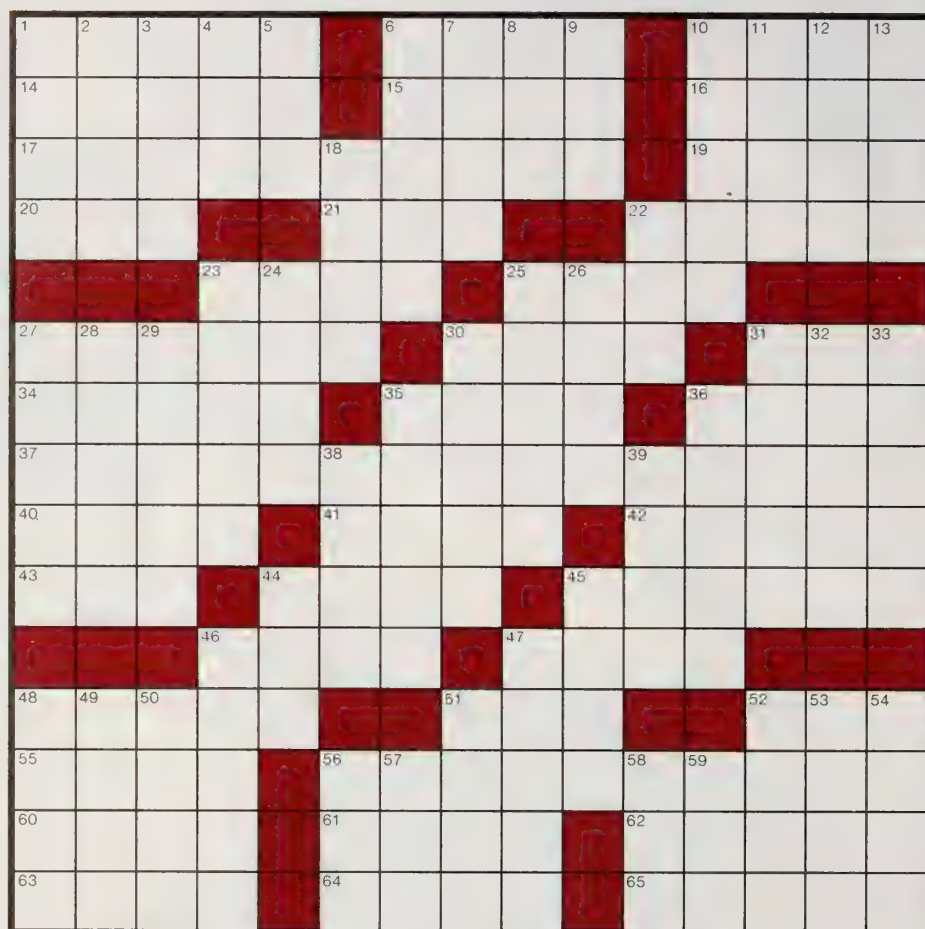
TOSHIBA

Kodak
DigiSource

Canon

Mixing Business with Pleasure by Lincoln

Puzzle #14



ACROSS

1. HMO giant
6. Rights organization: Abbr.
10. Buchanan et al.
14. Is too curious
15. Job opening
16. Lotion additive
17. Yahoo! is one
19. First senator in space
20. Mao __-tung
21. Fairness in hiring: Abbr.
22. EDS founder
23. GDP, e.g.
25. Deloitte & Touche staffers
27. Intensify, as competition
30. __ money (initial capital)
31. One of Turner's networks
34. Mideast capital
35. Texaco symbol
36. Attorney who helped found the New York Mets
37. Rubin's successor
40. Deceitful sort
41. __ Lackawanna Railroad
42. Create for oneself, with "out"
43. Shrewd
44. Gloria Vanderbilt logo
45. Agway customer
46. Health-care provider: Abbr.
47. Big moneymaker
48. George Bush's alma mater
51. __ Plaines, Ill.
52. __ Energy (Michigan-based utility)
55. Dry as a desert
56. Lettershop's business
60. Zales buy
61. Historical periods
62. High points
63. Record __ (dividend cutoff)
64. It may be minimum
65. Washer cycle

DOWN

1. Datebook entry: Abbr.
2. Piccadilly Circus statue
3. Pirelli product
4. Part of NAV
5. Simile center
6. Part of NAV
7. Commercial writer's award
8. Auction unit
9. Native American
10. Beeps, perhaps
11. Controversial apple spr
12. Big name in lawn-care machines
13. Faxed or overnighted
18. Word associated with Y
22. Inflate, as expenses
23. Attorney in the news
24. Adjust, as a radio
25. __ and desist
26. Major copper exporter
27. Mentholypus maker
28. One way to communicate
29. World's largest direct-st company
30. Nixon economic adviser
31. Gas-bill unit
32. Day trader's need
33. Personal-security device
35. Recycling material
36. __ card (ID with a memory chip)
38. Reuters business
39. Shoe-store surname
44. Minimal money
45. Royal treasury
46. Investor's insurance
47. Reagan confidant
48. Scotland __
49. Operatic solo
50. Fabric fuzz
51. Aircraft designer's conce
52. "__ the tuxedos, full spe ahead" (see ad at right)
53. Haberdashery display
54. Alternatively
56. Morning moisture
57. Saccharin discoverer Re
58. Coal product
59. UUNET owner

For answers to this puzzle:

Turn to page 205 in this week's issue of Business Week or visit Mixing Business with Pleasure by Lincoln on www.businessweek.com (URL: www.businessweek.com/adsection/puzzlesbylincoln/index.htm)

Puzzle created by: Stanley Newman.



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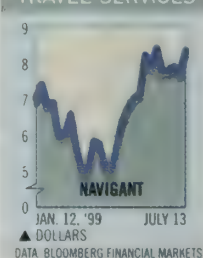
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The core operation of Navigant International (FLYR)—providing business-travel management services to midsize companies—isn't exactly novel or exciting. But of late its stock has taken wing, shooting up from 4½¢ in early April to 8½¢ on July 13. And Jay Petschek of investment firm Corsair Capital Partners says it's worth at least twice that price. What has Navigant got that other travel companies don't?

Navigant, No. 5 in corporate travel management, has embarked on an integrated program to provide online services to customers for both corporate and leisure travel. Petschek believes Navigant is in talks to form alliances with several Internet portal companies. To bolster its Internet services, Navigant has named Paul Blackney, chairman of XTRA On-Line, to its board. Blackney is also a board member at Priceline.com, the Internet auction house. Blackney hopes to help Navigant to become a premier electronic travel service company. Among Navigant's clients: US West, Sotheby's, Samsonite, and Walgreens.

The Internet allows Navigant to provide a higher level of service, notes Petschek, who has accumulated nearly 5% of Navigant shares. He thinks Navigant will eventually spin off its Internet business and take it public. He puts the value of the Internet operations at 10 to 15 a share. Analyst Keith Mullins of Salomon Smith Barney, who has a "speculative buy" rating on the stock, says Navigant should earn \$1 a share in 1999, up from 61¢ in 1998.

A BON VOYAGE FOR TRAVEL SERVICES



DATA: BLOOMBERG FINANCIAL MARKETS

CYBERSOURCE LOOKS AFTER E-BUSINESS

As a recent IPO among the bustling Internet crowd, CyberSource (CYBS) is still hopping. Offered at 11 a share on June 23 through top-notch underwriters led by Merrill Lynch and J.P. Morgan, the stock closed at 13½¢ on the first day. It has since vaulted to 25. Some money pros expect the stock to double this year, based on the vast market for CyberSource's products, which include fraud prevention, global payment processing, and tax calculation services to online merchants.

Part of the stock's fascination is the list of CyberSource's early investors: Microsoft co-founder Paul Allen, whose Vulcan Ventures still owns 11.5% after the IPO; General Electric Capital, with a 7.6% stake; and credit-card giant Visa

International, which holds 9%. Also impressive is CyberSource's customer roster, which includes Compaq Computer, IBM Software Group, and Beyond.com, a major online computer software retailer, which spun off CyberSource in 1997.

Some big investors are betting that CyberSource will attract buyout suitors once it's obvious that the market for its E-commerce transaction services is huge. One New York money manager who has been buying shares thinks that a credit-card biggie such as Visa could be interested in acquiring CyberSource. Visa and CyberSource are working together, notes the money pro, to build products that will protect Web merchants and their banks from Internet credit-card scams.

One CyberSource insider says he wouldn't be surprised if Visa or another credit-card company were to make a move. The company wouldn't comment since it was still in a "quiet period" in light of the June 23 IPO.

A SECOND CHANCE FOR TAKE-TWO?

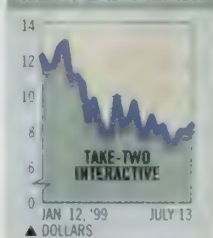
Video games are as popular as ever, but the shares of video-game companies, such as Take-Two Interactive Software (TTWO), have been cellar-dwellers this year. Take-Two—which develops games for PCs as well as for video-game platforms manufactured by Sony, Nintendo, and Sega Enterprises—hit 13¢ in early February but tumbled to 7 in mid-June. The stock may have touched bottom, say pros who have started buying in. The stock closed at 8½¢ on July 13.

The upcoming big market for Take-Two is—what else?—the Web. Take-Two is developing a multiplayer online version of one of its popular *Grand Theft Auto*, which could be the first of many such products designed for PCs to be re-designed as video games. And the company recently acquired DVDwave.com, a retailer of digital videodisk (DVD) movies. "Shortly, video games will be added to the mix," says Bob DeLean, an analyst at investment firm Morgan Keegan. "We believe this is an important strategic move, considering the consumer demand for E-commerce," he adds.

DeLean, who has a "buy" rating on Take-Two, thinks it may boost earnings at 25% to 30% annually over the next five years. He expects earnings of 62¢ this year and 80¢ in 2000, compared with 37¢ in 1998.

Take-Two CEO Ryan Brant says that, in 18 months, the company's Web business will generate some \$30 million in annual sales and about \$100 million in three years. Industry prospects have turned so rosy, says Brant, that the big media and toy companies that had bailed out years ago are considering jumping back into the business. Some may be looking hard at Take-Two.

STYLING DOWN IN THE BASEMENT



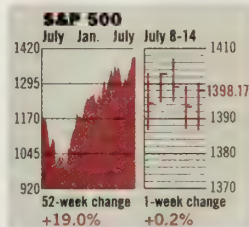
DATA: BLOOMBERG FINANCIAL MARKETS

HEADY GAINS SINCE THE IPO



DATA: BLOOMBERG FINANCIAL MARKETS

STOCKS



COMMENTARY

A generally mixed week in the financial markets, with computer stocks showing particular strength. The NASDAQ Composite climbed 40 points on July 14 to set its seventh record performance in the past ten trading days. Intel led the list of gainers, because of strong profit news. The euro fell to a record against the dollar on July 12 because of a drop in German industrial production.

Data: Bloomberg Financial Markets

U.S. MARKETS

	July 14	Week	% change Year
Dow Jones Industrials	11,148.1	-0.4	20.6
NASDAQ Composite	2817.9	2.7	43.2
NASDAQ 100	2416.8	3.3	70.4
S&P MidCap 400	423.9	1.4	14.6
S&P SmallCap 600	188.1	1.4	-2.8
S&P SuperComposite 1500	294.0	0.3	17.6

SECTORS

	July 14	Week	% change Year
S&P/BARRA Growth	791.8	0.9	25.2
S&P/BARRA Value	628.6	-0.6	11.5
S&P Basic Materials	137.4	0.0	11.0
S&P Capital Goods	1040.2	-0.4	16.9
S&P Energy	875.2	0.2	17.7
S&P Financials	144.3	-2.5	-2.3
S&P REIT	83.9	-0.5	-18.9
S&P Transportation	739.0	-2.1	3.1
S&P Utilities	258.3	-0.8	6.1
GSTI Internet	500.9	-2.4	197.9
Morgan Stanley Cyclical	599.8	0.1	14.9
PSE Technology	631.3	3.5	76.9

BEST-PERFORMING GROUPS

	Last month %	Last 12 months %
Health-Care Services	30.6	Semiconductors 96.8
Computer Systems	23.9	Computer Systems 85.7
Computer Software	22.6	Communications Equip. 81.6
Communications Equip.	21.6	Instrumentation 64.5
Semiconductors	20.6	Broadcasting 58.5

GLOBAL MARKETS

	July 14	Week	% change Year
S&P Euro Plus	1360.3	-0.5	
London (FT-SE 100)	6473.1	-1.9	
Frankfurt (DAX)	5610.9	0.4	
Tokyo (NIKKEI 225)	18,357.9	2.2	
Hong Kong (Hang Seng)	13,575.6	-4.8	
Toronto (TSE 300)	7253.1	1.1	
Mexico City (IPC)	5834.9	-1.4	

FUNDAMENTALS

	July 13	Week ago
S&P 500 Dividend Yield	1.17 %	1.17 %
S&P 500 P/E Ratio (Trailing 12 mos.)	35.1	34.7
S&P 500 P/E Ratio (Next 12 mos.)*	24.9	24.8
First Call Earnings Surprise*	3.51 %	11.34 %

*First Call Corp.

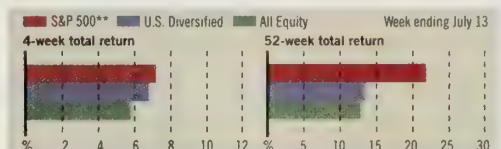
TECHNICAL INDICATORS

	July 13	Week ago
S&P 500 200-day average	1238.7	1229.7
Stocks above 200-day average	59.0 %	60.0 %
Options: Put/call ratio	0.45	0.40
Insiders: Vickers Sell/buy ratio	1.44	1.56

WORST-PERFORMING GROUPS

	Last month %	Last 12 months %
Pollution Control	-28.7	Manufactured Housing
Machine Tools	-21.7	Metal & Glass Containers
HMOs	-13.1	Apparel Manufacturing
Hospital Management	-11.1	Hospital Management
Metal & Glass Containers	-9.0	Pollution Control

MUTUAL FUNDS



Data: Morningstar, Inc.

**Vanguard 500 Index fund

EQUITY FUND CATEGORIES

Leaders	Four-week total return	%	Laggards	Four-week total return	%
Technology	15.9		Precious Metals	-2.5	
Japan	13.1		Real Estate	-2.0	
Small-cap Growth	11.7		Utilities	1.0	
Pacific/Asia ex-Japan	10.6		Europe	1.1	
Mid-cap Growth	9.7		Natural Resources	1.1	
Leaders	52-week total return	%	Laggards	52-week total return	%
Pacific/Asia ex-Japan	74.5		Latin America	-13.5	
Technology	69.8		Precious Metals	-10.5	
Japan	55.5		Real Estate	-9.3	
Diversified Pacific/Asia	52.4		Europe	-7.0	
Communications	47.7		Small-cap Value	-4.6	

INTEREST RATES

	July 14	Week ago	Year ago
KEY RATES			
MONEY MARKET FUNDS	4.55%	4.53%	5.10%
90-DAY TREASURY BILLS	4.69	4.67	5.14
1-YEAR TREASURY BILLS	4.97	5.06	5.35
10-YEAR TREASURY NOTES	5.73	5.92	5.48
30-YEAR TREASURY BONDS	5.92	6.08	5.70
30-YEAR FIXED MORTGAGE†	7.60	7.69	7.05

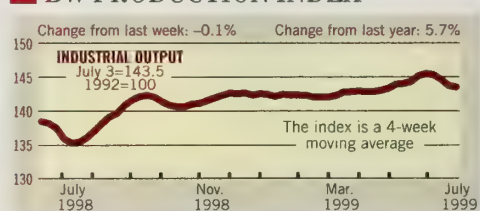
BLOOMBERG MUNI YIELD EQUIVALENT

Taxable equivalent yields on AAA-rated, tax-exempt municipal bonds, assuming a 31% federal tax rate.

	10-yr. bond	30-yr. bond
GENERAL OBLIGATIONS	4.73%	5.1%
TAXABLE EQUIVALENT	6.86	7.3%
INSURED REVENUE BONDS	4.87	5.1%
TAXABLE EQUIVALENT	7.06	7.3%

†Barr'sQuote, Inc.

BW PRODUCTION INDEX



Information on each of the index components is at www.businessweek.com. BW production index Copyright 1999 by The McGraw-Hill Companies

The production index continued its slide in the week that ended July 3. The index in the production data was evident monthly average. For all of June, the index fell 0.9%, to 143.9, from 145.2 in May. Before calculation of the four-week average, the index increased to 144.1 in the latest week from 143.2 in the previous week. After seasonal adjustment, all components were up moderately.

THE WEEK AHEAD

INTERNATIONAL TRADE Tuesday, July 20, 8:30 a.m. EDT ▶ The U. S. trade deficit of goods and services for May probably totaled \$19 billion, says the median forecast of economists surveyed by Standard & Poor's MMS, a division of The McGraw-Hill Companies. That would be little changed from the \$18.9 billion deficit posted in April. However, the expected May gap would mean that the trade deficit in the second quarter is on track to be much bigger than the first-quarter total. A wider trade deficit subtracts from real gross domestic product growth. The S&P MMS survey expects that exports edged up slightly, following a 1.2% advance in April. May imports, already up for four

months in a row, probably rose at a faster pace than exports, lifted in part by higher prices for petroleum products.

HOUSING STARTS Wednesday, July 21, 8:30 a.m. EDT ▶ Housing starts probably slipped to an annual rate of 1.65 million in June, says the S&P MMS survey. In May, starts jumped 6.3%, to a 1.68 million rate, but that gain followed three monthly drops. As a result, home construction was probably a drag on economic growth in the second quarter. However, housing has benefited from solid gains in jobs and incomes as well as near-record-high consumer confidence. The industry should do well over the sum-

mer, despite higher mortgage rates this than in 1998.

FEDERAL BUDGET Thursday, July 22, 2 p.m. EDT ▶ The S&P MMS median forecast expects that the U. S. Treasury will report budget surplus of \$57 billion in June as quarterly taxes are paid. That would be more than the \$51.1 billion windfall posted in June of 1998.

BusinessWeek ONLINE

For more investment data and the components of the production index, visit www.businessweek.com.

x to Companies

gives the starting page for a story or a significant reference to a company. Companies are indexed under their own names. Listed only in tables are not included.

ABR 30, EB16
EB58
EB58
316
Devices (AMD) 38
Beauty Care EB58
AZN 40, EB12,
44, EB52, EB58,
s (AMR) EB26
is Financial
78
EB44
(AOL) 66, EB52
36
iting EB58
ent EB58
(AAPL) 90, 108
group 30
108
16
s 118
Securities 39
(BAC) 6
com (BNBN) EB72
54
(SCI) 32, 36, 98, 100
tal EB58, 82
(NO) 135
ncial Markets 98
32
4
(BAMM) 82
BGP) EB44
36
uubb (BMY) 120
(BCST) 96, 98
ss EB20
EB44
40, EB64, 82
dings 66
ia (AMFM) 66
36
08
CSCO) 40, EB52
130
18
Communications
08
B16, EB39
19
6
e (TWX) 40
ter (CPQ) 38, 108,
ons (CHRZ) 107
WR) 10
EB72
eightways
ines (CAI) 108
Partners 135
rst Boston 34
YBS) 135
r (DCX) 6, 28, 87
2
5
(DELL) EB14, EB16,
he EB16
ive Systems
8
Alex Brown 98
Digital Equipment 108
Donaldson Lufkin & Jenrette
(DLJ) 98
DoubleClick (DCL) 30, EB16
DuPont (DD) 74
DVDWave.com 135
E
Eagle Electronics 122
Eastman Kodak (EK) 118
eBay (EBAY) EB14, EB16, EB44,
EB52, EB58, EB64, EB72, 82
Effnet Group EB52
Egghed.com (EGGS) 40
Electronic Arts (ERTS) 108
E*Loan (EELN) EB58
Embassy Suites 78
Engage Technologies (CMGI) EB16
Envision Capital Management 32
E*Offering 96
E.piphany EB16
EQ Online EB52
Ensson (ERICY) EB52
Ernst & Young EB32
ESPN (DIS) 66, EB39
e-Steel EB72
eToys (ETYS) 84
Excite@Home (ATHM) 40
Exhibitor Relations 39
Exxon (XON) 74
F
FAC/Equities 36
Fairfield Inns 78
FamilyEducation Network EB16
Fasciano Fund 124
Federal Express (FDX) EB44, 84
Federated Department Stores
(FD) 84
Fellow Lodging Trust (FCH) 78
Ferrari 6
Fiat (FIA) 87
Fidelity Investments 96, 124
Fingerhut Companies (FHT) 82, 84
First Albany 36
First Call 36, 107
Flow International 6
Ford (F) 6, 28, 32
Forrester Research (FORR) EB16,
EB44
Fox Sports (FOX) 66
FridgeDoor.com EB64
Friedman Billings Ramsey 96
Fuji Photo Film (FUJIY) 15
Fuld EB12
Furniture.com EB16, EB23
G
Gabeli Funds 124, 128
Gap (GPS) EB14
Garden Inn 78
Gartner Group (IT) 108
Gateway 2000 (GTW) EB14, EB39
General Electric Capital (GE) 32,
135
General Motors (GM) 6, 28, 32
GetMusic 40
Glewwer Door EB32
Global Crossing (GBLX) EB58
Goldman Sachs (GS) 6, EB39,
EB44, 96, 98
Government Computer Sales EB16
Grainger (W.W.) (GWW) EB16
Grundig 38
H
Hambrecht (W.R.) 96
H&G Sales EB32
Hewlett-Packard (HP) EB20, 71,
108
Hicks Muse Tate & Furst 66
Hilton Hotels (HLT) 78
Hoffmann-La Roche 120
HomeGrocer.com EB44, EB72
Honda (HMC) 6
Hypermart EB64
Hyundai Electronics 46
I
IBM (IBM) 90, 108, 135
icollector.com EB58
Icon Mediatelab EB52
iMail (IMAIL) 40
Infotask (SFEK) EB16
Ingram Books 6

Institutional Venture
Partners EB58
Intel (INTL) 18, 38, 40, 108
International Data 38, EB64
IPQ.com 96
J

J&W Seligman 66
Jamon Capital 66
Jupiter Communications 82
K

Keenan Vision EB64
Kemper Funds 34
KeyCorp (KEY) EB16
Kubren Insight Group 128
KPMG Peat Marwick EB58
L
Legend 38
Lehman Brothers (LEH) 48, 96
Letsbuyit.com EB52
Levi Strauss 84
LG Semiconductor 46
LibertySurf EB58
Lilly (LIL) (LILY) 120
Little (Arthur D.) 46
Lockheed Martin (LMT) 40
Longleaf Partners Funds 124
L'Oréal EB52
Lotus Development (IBM) 108
Lowrance Electronics (LEIX) 122
LSI Logic (LSI) 38
LVMH Moët Hennessy Louis Vuitton
(LVMHY) EB44, EB52, EB58
Lycos (LCOS) EB64
M

Manne Midland Bank 100
Marmot International (MAR) 78
Mayfield Fund EB58
McGraw-Hill (MHP) 6, 136
McKinsey EB72
Media Metrix (MMXI) EB39, EB68,
82
Mel Farr Auto Group 6
Meridian Value Fund 124
Merrill Lynch (MER) 6, 32, 40,
EB72, 96, 107, 135
Microsoft (MSFT) 18, EB16, EB68,
EB72, 90, 135
Milton Bradley (HAS) EB39
Mips Technologies (SGI) 38
Mitsubishi 18
Morgan (J.P.) (JPM) 135
Morgan Keegan 135
Morgan Stanley Dean Witter
(MWD) 22, 96, 108
Motivat 6
Motorola (MOT) 38
N

National Semiconductor (NSM) 38
Navigant International (FLYR) 135
NBC (GE) 66
NEC (NIPNY) 11
Nedicon EB52
NetBank (NTBK) 130
NetGrocer EB12
NetRoadshow 98
Network Appliance (NTAP) 96
New England Consulting Group 82
New Line Cinema 39
News Corp. (NWS) EB52
NextCard (NXCD) EB16
NextVenue 98
NFO Interactive EB14
Nike (NKE) EB14
Nintendo 135
Nokia (NOK) EB52
Northstar Investment
Management 107
O.P.
OfficeMax (OMX) 107
Onsale (ONSL) 40
Oracle (ORCL) 108
Oz.com EB52
Paramount 39
Pasteur Menieux Connaught
USA 72
Payment Protection Systems 6
pcOrder.com 108
Peapod (PPOD) EB44
Peppers & Rogers EB16
Pets.com EB72
Pharmacia & Upjohn (PNU) 120
Philips Electronics (PHG) 38
Pier 1 84
PIMCO Funds (PA) EB16
Piper Jaffray (USB) 108
PlanetRx.com 82
Pleasants Hardware EB32
PolyMould 90
Pradco 122
Preview Travel EB68
Priceline.com (PCLN) 135
PSA Peugeot/Citroen 87

Q
Quebecor 40
Quake.com (INTL) EB16
QA EB58
R
Rosenwood Winery 96
Raytheon (RTA) 108
Reynolds Marketing 82
Remediation Capital 96
Remediation-Holmes & Resorts 78
Resall Sundown (RXSD) 107
Ritz Carlton 78
Robert Bosch Group 87
Robinson-Humphrey (C) 98
Royal Dutch/Shell (RD) 36
Royce Total Return Fund 124
S
SabreTech 40
Salesforce.com EB39
Salomon Smith Barney (C) 48, 135
Salon.com (SALN) 96
Samsonite (SANC) 135
Sanofi Pharmaceuticals 120
SAS EB52
Saturn (GM) 10
Schlumberger (SLB) 40
Schwab (Charles) (SCH) EB20
Sears (S) 6, EB12, EB64
Securities Data 96
Sega Enterprises 135
Shimano 122
Siegel & Gale 54
Siemens 18
Silicon Graphics (SGI) 108
Silknet Software (SILK) EB58
Simon & Schuster 6, 96
SmarterKids.com EB16
SmithKline Beecham (SBH) 72
Sodexo Marmot Services
(SDH) 78
Softbank EB44, EB52
SoftBook 6
Sony (SNE) 40, 135
Sotheby's Holdings (BID) 135
SoundView Technology Group 38
Southwest Sports Group 66
SSA Emerging Markets Fund 124,
127
Standard & Poor's (MHP) 78, 124,
136
Sudbury Group EB58
T
TAG McLaren 6
Take-Two Interactive Software
(TTWO) 135
Telebank (TBFC) 130
Telefonica (TEF) 66
Templeton Funds 124, 127
Texas Rangers 66
Thompson (J. Walter) 54
3Com (COMS) 6
Time Warner (TWX) 40
Toyota (TOYOT) 6
Toys 'R' Us (TOY) 82
Transocean Offshore (RIG) 40
Travelocity EB68
Tripod EB64
U, V
Universal Studios 39
U.S. West (USW) 135
Value Line Funds 124
Valujet Airlines 6, 40
Vanguard Funds 124, 127
VentureOne EB58
Via Technologies 38
Visa International 135
Visio (VSI) EB20
Vivendi EB52
Volkswagen 87
Volpe Brown Whelan EB72
Volvo (VOLVY) EB52
Vulcan Ventures 135
W
Walgreens (WAG) 135
Wal-Mart (WMT) EB16, EB44, EB64,
EB72, 82, 84
Walt Disney (DIS) EB64, 39
Warner Bros. (TWX) 39
Waste Management (WMI) 40
Webvan Group EB44
Weiss (Thomas) Partners 96
Wells Fargo (WFC) 130
Westinghouse (CBS) 18
Weyerhaeuser (WY) EB32
Wit Capital (WITC) 96
World Color Press (WRC) 40
X, Y, Z
XTRA On-Line 135
Yahoo! (YHOO) 18, EB16, EB44,
EB64, EB72, 96, 98, 130
Yankee Group Research EB64
Z
Zf Industries 28

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Answers from puzzle #14
in Business Week.



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THE NEW ECONOMY FINALLY GETS SOME RESPECT

Conventional wisdom can be comforting, but it can be suffocating, too. For the past three decades, conventional wisdom has held that the U.S. economy could not grow faster than 2% to 2.5% a year without setting off inflation. This slow-growth view was institutionalized in Washington by the Federal Reserve, propagated in academia by economics departments, and evangelized on Wall Street by forecasters.

Until now. In the past few months, a mass conversion has taken place, with economists and policymakers rejecting slow-growth economics for a New Economy paradigm. Fed Chairman Alan Greenspan endorsed the shift in thinking when he testified recently that the U.S. can now safely grow at 3% annually over the long term. If fresh economic thought requires a long journey of escape from conventional thinking, as John Maynard Keynes once observed, then America has just experienced a gigantic intellectual jailbreak.

THE DANGERS OF CYNICISM

The consequences are immense. Over the last three years, if growth had been 2.5% rather than the 4% it was, the country would have lost \$600 billion in output and 2 million people would have been put out of work. Even if growth averages a milder 3%, rather than 2.5% over the next decade, every man, woman, and child in the country will still be about \$3,000 richer. That adds up to \$879,000,000,000. Such is the power of the New Economy.

But convincing people of that shift has been long in coming. Institutional and intellectual resistance has been fierce. Few have been willing, until recently, to admit that information technology is replacing the old industrial manufacturing base, doubling the productivity growth rate, to 2%, and allowing for faster growth. Some economists were simply wedded to their traditional models, which showed productivity stuck at 1% and inflation rising when unemployment dipped below 6%. Others couldn't see the technological forest for the trees and denied the revolutionary implications of changes in computing and telecommunications. One prominent economist went so far as to argue that air-conditioning was a more important innovation than PCs in economic life. Still others demanded hard data on productivity before jumping.

BUSINESS WEEK saw the implications of the information revolution for growth long before most economists. And for good reason. In times of fast change, journalism can be more prescient than academia. The magazine had reporters actually on the ground covering business. And it wasn't wedded to any particular economic models or ideology. When businesspeople began talking about the huge gains in productivity they were achieving thanks to information technology, it was clear something had changed. This was years before official statistics showed productivity rising. In 1994, in "Why Are We So Afraid of Growth?," "The Information Revolution," and "The Real Truth About The Economy,"

BUSINESS WEEK described the early signs of an emerging New Economy. By late 1997, in "What The New Economy Really Means," incipient signs of higher productivity growth were appearing in the statistics.

By keeping an open mind and listening to executive magicians was able to get an early look at how innovation was changing the economy. While much of the economics establishment remained cynical about the impact of computers, the early '90s, another shift was already under way: PCs to the Internet. A tidal wave of innovation was at hand, as big as anything seen in the 19th or early 20th century. Yet pundits, including many in Europe, remained removed from the real world, locked into their orthodoxies. It was fashionable to be cynical. America's economy was all bubble and destined to crash and burn.

The shift to New Economy thinking reached critical mass early this year, when the business expansion moved into its ninth year. By then, higher productivity was consistently showing up in government figures, growth had chugged at 4% for three years (too hot for Greenspan, who is comfortable at 3%), unemployment remained around 4%, and inflation was still dormant. Economists who wanted to see productivity numbers had them. Others, waiting for the economy to soar, threw in the towel. The stock market crashed. And corporate profits started rising again, despite the pricing power. It all added up to the New Economy.

Cynics remain. Some are reduced to saying that the New Economy advocates turned out to be right but for the wrong reasons. Not so. The argument never rested on "unmeasured" productivity growth, as they wrongly claimed. Others insist on raising straw men—for example, denying that the business cycle is dead. It isn't. Who said it was? What is true is that because of productivity gains, the economy now operates at a higher speed limit without inflation.

A NOTE OF CAUTION

But precisely because the New Economy is now becoming the new orthodoxy, it is time to sound a note of caution. Some stocks are considerably overvalued and a correction could set in. An economic downturn is ultimately inevitable, and with so much growth dependent on one sector—information technology—it could be severe indeed. So it was in the 1930s following the automotive revolution and in the 1870s after the boom in railroads. And finally, it remains to be seen what happens to productivity when growth slows.

Our own hunch is that the Internet will lead to further productivity gains as businesses restructure their operations. But promoting the New Economy also requires wise leadership from Washington. We need to support basic research and education at all levels, the seed corn of innovation. We need sound fiscal policy, not the ideological demagoguery we've gotten. The economic landscape looks fundamentally changed. Let's nurture the New Economy—not screw it up.

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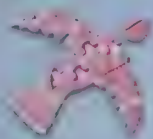
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THE BOSS

CEO Carly Fiorina's Challenge at HP

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COVER STORY

THE BOSS

Can Carly Fiorina propel Hewlett-Packard into the Internet Age? page 76

BusinessWeek

AUGUST 2, 1999

BIG IDEAS

Kodak focuses on the digital future page 66



A PACT FOR DELPHI?

Labor may O. K. an old compromise for GM's spin-off page 62



Cover Story

76 THE BOSS

Carly Fiorina has a silver tongue and an iron will, and it will take all her charm and mettle to get Hewlett-Packard to go where she wants it to go. The new CEO is not only the first woman to head a Dow 30 corporation but the computer giant's first top executive to be hired from outside. But then, these Internet times are anything but business as usual. Her challenge will be to coax a culture out of its moribund ways while not losing the elements that have made HP a model of dependability

News: Analysis & Commentary

28 CORPORATE CASH MACHINES

U.S. companies have plenty of dough these days. How they spend the windfall will determine what happens to the economy next

30 FLASH PROFITS: UP, UP, AND AWAY

A scorcher of a second quarter

31 WHY UNEMPLOYMENT HURTS LESS

Layoffs are up, but displaced workers get new jobs fast

32 APPLE KEEPS ON ROLLING

After the iMac's success, it looks like Steve Jobs's notebook version will garner further profits for Apple

33 COMMENTARY: TRACKING STOCKS

The conflicts of interest they create make them more than a bad idea—they're accidents waiting to happen

34 NO BLOCKBUSTER FOR BLOCKBUSTER

The Net is threatening the company's prospects—and hampering its IPO plans

36 MEDICARE AND MANAGED CARE?

HMOs are dropping Medicare patients because they cost too much

38 COMMENTARY: CAMPAIGN FINANCE

George W. Bush, the accidental campaign-finance reformer

40 COMMENTARY: THE DIGITAL DIVIDE

Across America, there's a troubling gap between the wired and the unwired

45 IN BUSINESS THIS WEEK

International Business

48 CHINA: THE WEB MASTERS

The battle to control Asia's hottest Internet market will affect business around the world

50 JAPAN: CORPORATIONS

New accounting rules will force companies to reveal bad news

52 COMMENTARY: KOREA

It's time for President Kim Dae-jung to begin splitting up the chaebol

54 EUROPE: AIRBUS

As the plane maker remakes itself, it is considering some radical steps

59 INTERNATIONAL OUTLOOK: MEXICO

Bad business at the banks could threaten the ruling PRI

Economic Analysis

21 ECONOMIC VIEWPOINT

Becker: Flaws in the disability

24 ECONOMIC TRENDS

Car sales, the "profit surprise" in Argentina, women shun economy

25 BUSINESS OUTLOOK

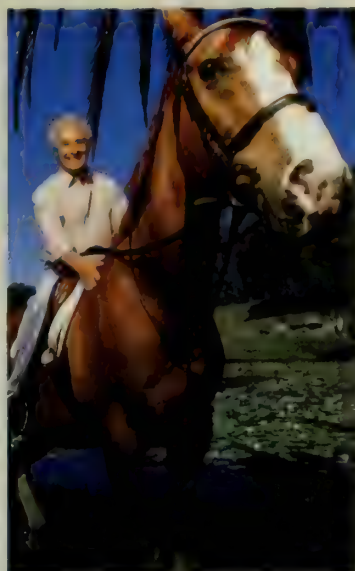
Those GDP figures won't set off

Government

47 WASHINGTON OUTLOOK

If the Dems are warming to tax cuts, it may be to neutralize a classic

NCH
E
standing
keep
outh
page 86



BACK IN THE SADDLE
Marty Wygod returns to health care with a bold new venture
page 89



REVOLUTIONARY CHANGE
How the Net is transforming China's economy
page 48



FULL TANK
Corporate cash could keep the expansion alive
page 28



UNDER FIRE
Why NASD's small firms are up in arms
page 70

eks
luc
s—
are
g
e 102



Science & Technology

WHICH STRAINS OF UNZAPPABLE BUGS
Here's progress in fighting bacteria
are resistant to antibiotics

Workplace

WALK OUT FOR DELPHI?
Law might O. K. a pension
promise for GM's parts spin-off

Corporation

WALK'S DOUBLE-SIDED PLAN
Photo giant thinks there's money to
made in both digital and film

Finance

VOLT AT NASD?
Firms want more of a say as
SEC considers branching into
seas and nighttime trading
WALKER'S CYBER-BANK
McCoy is embracing E-commerce
Wingspan, a new branchless bank
WALL CAPS FLEE THE STREET
John and other Wall Street
lowers are going private

Legal Affairs

74 COMMENTARY: PATENT LAW
How the Supreme Court is penalizing
Corporate America

Information Technology

16 TECHNOLOGY & YOU
Ask Jeeves flunks our test
86 BELLSOUTH: FEELING SMALL?
In a climate of megamergers, it may
have to expand in order to survive
88 A TELECOM MERGER, WITH STATIC
Qwest and U S West face big challenges

People

89 MARTY WYGOD RIDES AGAIN
The health-care maverick bets on the
Net with CareInsite, a medical network

BusinessWeek Lifestyle

98 WHAT UNITES EUROPE? LATE FLIGHTS
The on-time record on the Continent
gets worse and worse

100 BLOCK THAT SUN

The risk and what you can do about it

BusinessWeek Investor

102 THE MARKET'S SPARROWS FLY HIGH
Despite their high volatility, microcap
stocks can offer better returns
104 BEHIND BLACKROCK'S MICRO MAGIC
An interview with co-manager Callan
106 THE BARKER PORTFOLIO
A fund that runs on autopilot
109 GENE MARCIAL: INSIDE WALL STREET

Features

4 UP FRONT
8 READERS REPORT
12 BOOKS
95 DEVELOPMENTS TO WATCH
A radioactivity detector, the pain gene,
multimedia CD for the Net
110 FIGURES OF THE WEEK
111 INDEX TO COMPANIES
112 EDITORIALS

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Up Front

EDITED BY ROBERT McNATT



CYBER WORLD

A COFFEE BREAK AT STARBUCKS?

HOWARD SCHULTZ, CHAIRMAN and CEO of Starbucks Coffee, has landed in hot water of late for seeming to place the company's Internet ambitions ahead of its core operations. Schultz has stated that he wants a cushy Starbucks Web site that sells everything from kitchen items to couches. But in early July, Starbucks' share price plummeted when the company forecast lower-than-expected earnings in 1999, causing some to wonder whether



I'LL POUR: Java time

Schultz's Internet fever has gotten out of hand. "At Starbucks, the Internet has become a distraction," says Douglas Christopher, an analyst at Crowell, Weedon & Co.

Such criticism isn't stopping Schultz from

steaming ahead. Sources in Silicon Valley tell BUSINESS WEEK that Starbucks is investing some \$20 million into Austin (Tex.)-based startup living.com, a company that plans to begin selling home furnishings and accessories online on July 26. Although Schultz won't sit on living.com's board, he is expected to lend the company his retailing expertise. The move follows Starbucks' failed attempt to acquire Williams-Sonoma, whose online store is expected to be launched in November. Starbucks declined to comment. *Linda Himelstein and Louise Lee*

STRUGGLING COMRADES

A BRISK BLACK MARKET IN BABIES

THE PREGNANT 22-YEAR-OLD from Moldova, a former Soviet republic, had no husband, no prospects—and four children. So she answered an ad promising a trip to Israel and cash for her unborn child. "I was told he would be given to a good family," she says. He was. But the woman is serving two years in prison for selling her child.

The black-market baby trade is brisk in the former Soviet Union. The collapsing economy has meant thousands of abandoned kids. Western couples are eager to adopt them. But corruption in legal

adoptions means the price averages \$40,000, leaving a niche for baby traffickers, who may ask half that.

Russian investigators say the Moldova ring has sold 50 babies to U.S. and Israeli families in the past two years, while a Russian ring has sold 20 babies to U.S. parents. Both Washington and Moscow have taken notice, and the Russians have actually started their first prosecution of an alleged baby seller.

Child advocates worry that the anti-corruption push could end; some nationalist politicians are seeking votes by bashing international adoptions, legal or no. That, the advocates fear, will do little to stop bad guys from making a buck on kids. *Margaret Coker*

TALK SHOW "John and Carolyn were true soul mates, we hope to honor them in death in the simple manner in which they chose to live their lives."

—Parents of Carolyn Bessette Kennedy and Lauren Bessette killed in the JFK Jr. plane crash

I-WAY PATROL

JOHN HANCOCK, WE HARDLY KNEW YE

WHEN CONGRESS SENT THE Y2K liability legislation to President Clinton this July, lawmakers were eager to show they were technology-savvy. They E-mailed an electronic version of the bill to the White House. But the President couldn't sign it, because electronic signatures

set guidelines to validate secure online transactions which should be a boon to E-commerce. Brokers, such as Charles Schwab, for instance, say cyber-signatures make online trading more accessible to the public. If the bill becomes law, your nature," a series of encrypted keystrokes known only to you, will be just as big as the "pen-and-ink" version. With no opposition, and the backing of such heavyweights

Bin Clinton...

aren't legally binding. So Congress sent the bill over on paper, and Clinton signed the old-fashioned way: in ink.

But that may not happen to the next President. Congress is drafting a bill that would legalize digital signatures. The government would

as IBM and General Electric, the bill could pass yearend. In all three versions of the legislation now in Congress, Congress would prestate regulations on validating E-signatures, until states have their own policies in place. *Alyssa*

BIG OIL

UNCLE SAM MAY HIT A GUSHER

SAN FRANCISCO-BASED OIL giant Chevron says that it is in talks with the federal government to settle complaints that the company underpaid the Interior Dept. by more than \$100 million in royalties for oil pumped from public lands. If a deal is reached, Chevron would be the second big oil company to settle

A Chevron spokesman had no comment on whether a final deal might look like the details of the company offer are proprietary. Sources close to the department say that the company could be on the hook for \$100 million. Chevron has already paid \$110 million to settle similar lawsuits in California and Alaska. Overall, the royalty underpayment issue already cost Big Oil some \$1 billion.

Meanwhile, oil patch



charges that it stiffed Uncle Sam. Mobil was the first. It admitted no wrongdoing, but it paid out \$45 million in August, 1998.

lators, led by attorneys Kay Hutchison (Tex.) and Domenici (N.M.) want to give a break from rules that require royalties. They want to implement the hoping that George W. Bush will be elected President next year. *Lorraine We*

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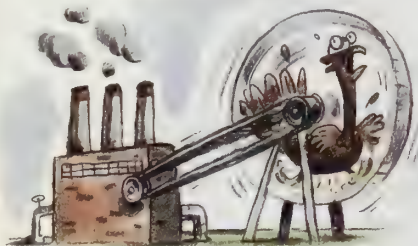
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FARM AID

A NEW USE FOR TURKEY LEFTOVERS

MINNESOTA HAS MORE TURKEYS than people. The 45 million turkeys the state produces a year create so much waste—and odor—that lawmakers



have threatened to force poultry producers to put the waste in enclosed buildings.

Then turkey farmer Greg Langmo heard that London energy company Fibrowatt had built electricity plants in Britain fueled by steam from burning poultry waste and bedding straw. A parade of

farmers and county officials made several trips to woo Fibrowatt to Minnesota. Now, the company is proposing a \$70 million, 48.5 megawatt plant that would burn 500,000 tons of droppings a year, producing enough electricity for 67,000 people. The state is considering helping underwrite it. Farmers would get \$2 to \$5 a ton for their waste.

Langmo hopes a Fibrowatt plant will be online within three years. Catamount Energy in Rutland, Vt., which has a 44% stake in two of the British plants, is interested in the Minnesota project. "There's no odor—no smell," says Catamount Senior Vice-President Doug Barba. "Several EPA officials and several influential senators have been over to see it, and they all like it." No word on what the turkeys think. *Dennis Blank*

GENDER WATCH

WHY DIDN'T HOOTERS THINK OF THAT?

HOW DO YOU FILL YOUR nightclub? Well, there's happy hour, of course, and ladies' night. But Steve Gupta, owner of a new dance club in Melbourne, Fla., is trying something a little different. Make that a lot different. As local radio ads for his club, Energy, put it, female patrons who enter a drawing can win "a free set of sumptuous new breast implants—any size, any shape."

Sure, it's crass. But it has proven effective. "They're signing up left and right," says bar manager Lisa Flanagan. Every Wednesday in July, hopefuls put their names in for the grand drawing, to be held in late July or August. Few have expressed concerns about their health—only their figure. Joanne Rivera decided to try for the



mammary enhancements despite her husband's discouragement. "I've wanted to do it for a long time," she says. "It just wasn't feasible—it's around \$4,000." She says 75 women from her office have also decided to try to win the procedure.

The giveaway is an intriguing marketing gimmick. But will Gupta be offering comparable "help" to his male patrons? "No," he gulps. "Nothing like that." *Robert Barker*

DRAWN & QUARTERED



UP, UP, AND AWAY

FINALLY, AIRPLANE FOOD THAT'S NO JOKE

THE AIRLINE OF THE LAND down under is offering gourmet cooking up above. Australia's Qantas Airways has put chefs on some of its 747s to whip up the first meals that are actually cooked, not just nuked, on board.

The freshly made fare is available only in first class and business class, and only on long-haul flights between Australia and Hong Kong, London, and a few other destinations. Front-of-the-plane fliers heading for New York and Los Angeles

will get the Aussie *hautsine* later this year.

Qantas hired a top ney chef, Neil Perry, to the airborne chefs, who in kitchens equipped electric appliances. And body's just tossing and



shrimp on the bie. Each spends two hours per trip preparing five-course meals that include roasted lamb cut with hummus.

"It's about somebody bringing gourmet into air dining," says man Sherlock, executive director of the National Business Travel Association. Alas, coach passengers only be able to smell good stuff. *Dennis B.*

THE BIG PICTURE

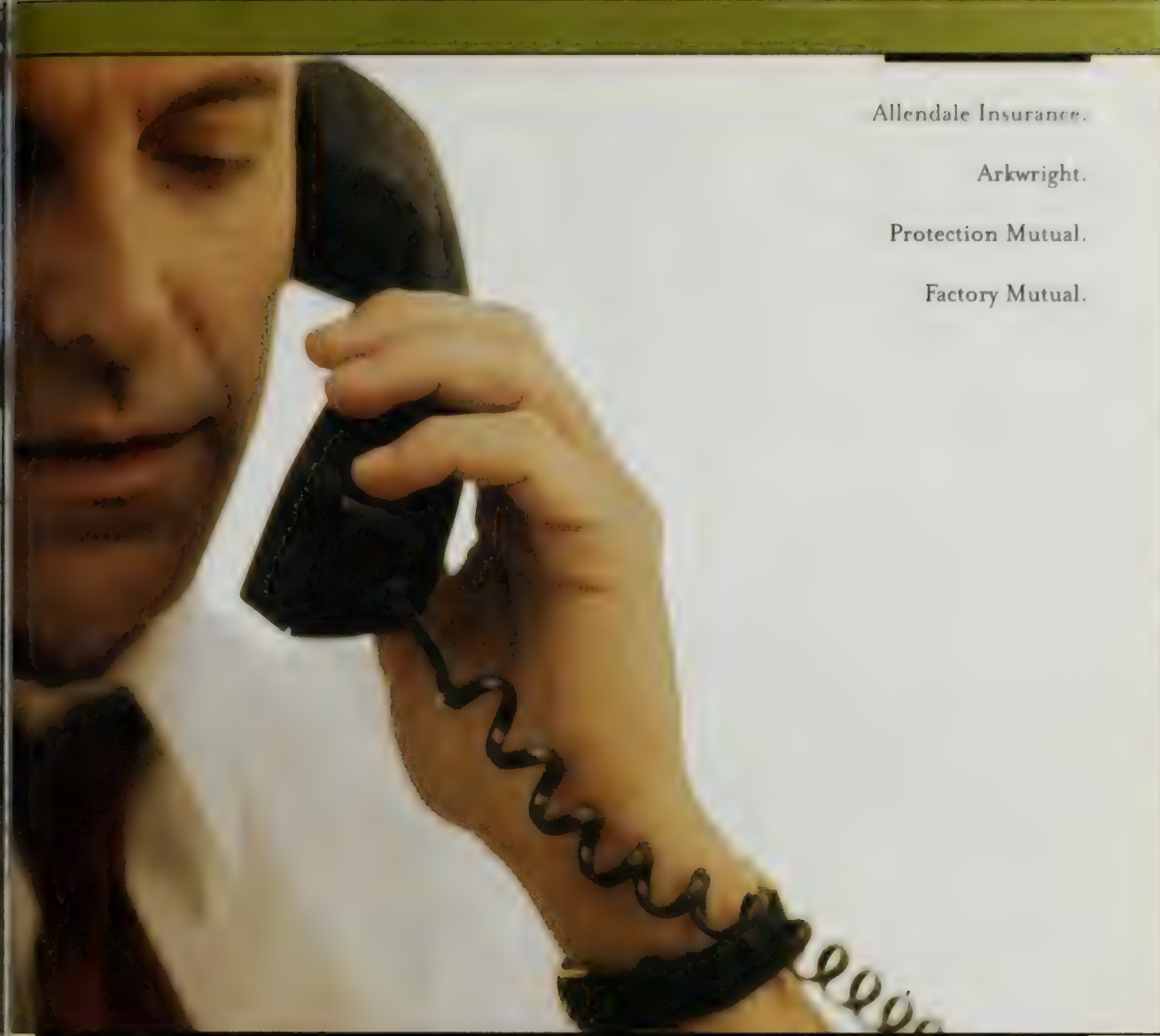
DEBT ON THE RISE

In developing nations, foreign debt and the interest payments on it are rising. That debt also represents a larger share of those countries' economies now; 37%, vs. 21% in 1980.



DATA: WORLDWATCH INSTITUTE/WORLD BANK GROUP

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WHY CANADA'S ECONOMY IS SO STUNTED

I was fascinated by the news of rapid growth in self employment in Canada ("Job growth, Canadian-style," *Economic Trends*, July 12). Canadians have actually known about this trend since 1997, when its importance was highlighted by the federal Advisory Committee on the Changing Workplace.

As a self-employed Canadian (with close to 20 years of professional experience and 44 academic and technical publications on my résumé), I hold the view that the reasons have little to do with fast-rising taxation but a lot to do with government failure to support the educational and research infrastructure without which a knowledge-based economy and society cannot thrive.

To provide just one example, U.S. federal funding for medical research, on a per capita basis, is several times the comparable Canadian figure. Canadian scientists with international reputations still find financing both for basic research and for commercialization extremely difficult to obtain. The consequence of this neglect is that opportunities educated Americans take for granted, in both public and private sectors, are virtually nonexistent here.

Canada will soon be in a situation where this trend is all but impossible to reverse. Thus, the much-discussed gap in incomes between the two countries is almost certain to widen, whether or not our domestic right-wing pundits succeed in selling their simple-minded panacea of tax cuts and more tax cuts.

Ted Schrecker
 London, Ont.

GOOD REASONS FOR JESSE TO VISIT THE VALLEY

"Jesse's new target: Silicon Valley" (*Social Issues*, July 12) unfairly marginalized the Reverend Jesse Jackson's participation as a publicity stunt without presenting the actual evidence of racial discrimination in the high-technology industry. Your staff had access to *Silicon*

Ceiling: Solutions for Closing the Digital Divide, a 600-page report by the Coalition for Fair Employment in the Valley, which reported on 253 high-tech federal contractors. More than 7% of African Americans we surveyed reported workplace discrimination. Only 6% of the 253 companies achieved the Bay Area norm for African-American employees, despite the presence of 30% blacks in high-tech jobs nationally—including 150,000 systems analysts and programmers—and despite the existence of 1 million black military veterans under 35 with technical training. The Silicon Ceiling is so daunting that even a black Rhodes Scholar could not get through it. The coalition has discovered many other well-trained professionals with similar experiences.

As bad as things are, we have a solution-oriented. We have prepared a list of 35 effective practices for opportunity performance and created a joint Web site and recruitment program among each of the major professional groups in the Bay Area.

By casting the issue as a personal struggle, *BUSINESS WEEK* unfairly placed CEOs in the position of appearing to pose fair employment practices. They have been part of federal law since 1964. Instead, we call on Silicon Valley companies to end the trend of 90% compliance in the industry to save shareholders from the exposure that recently visited such companies as Hyundai Semiconductor.

John William Templeton
 Co-Convener
 Coalition for Fair Employment
 Silicon Valley
 Oakland, Calif.

A WELFARE CLASS OF COLLEGE GRADS?

I was sorry to see Christopher Farrell usually a fairly sensible commentator suggest a government-subsidized system of income-dependent paybacks on college loans ("Loans for college don't have crush grads" *Economics*, July 12).

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urly offensive to common sense is suggestion that those with low life-earnings should be excused from repayment, at taxpayer expense. Farrell's heart is no doubt in right place, but such a system as outlined would be a fiscal and administrative disaster.

At the very least, there would need to be some checks on loan recipients to verify the low incomes they claim to qualify for forgiveness or slower repayment. In effect, we would be turning loan recipients into welfare recipients, with verification systems to ensure they still qualify for their benefits.

In addition, the proposal would encourage people to gain degrees in areas of study that, while perhaps interesting and edifying, bear little hope of ever being remunerative. A graduate in a dying field doesn't have any "right" to a higher income, or to a reduced-cost education, simply because she or he has a degree. This proposal penalizes those who choose to enter fields of study that don't have good job prospects, and it amounts to an antimarket attempt to subsidize some lines of work over others. It is social engineering, not good public policy.

Steve Florman
Andover, Minn.

WHY SHOULD TAXPAYERS SUBSIDIZE SKY BOXES?

"Fenway vs. the other green monster" (News: Analysis & Commentary, July 12) reminded me of ancient Rome. In those days, government attempted to curry favor with the masses by offering "bread and circuses."

Today, we call it sports pork. How sad that taxpayers across America are paying the majority of costs for new stadiums. Public dollars on the city,

county, state, and federal level are being used as corporate welfare to subsidize a private sector business. The only real beneficiaries of these expenditures are team owners and players. It is impossible to judge the amount of new economic activity these so-called public benefits will generate. Professional sports is not an essential service that qualifies for government support. Taxpayer funds would be better spent elsewhere.

Larry Penner
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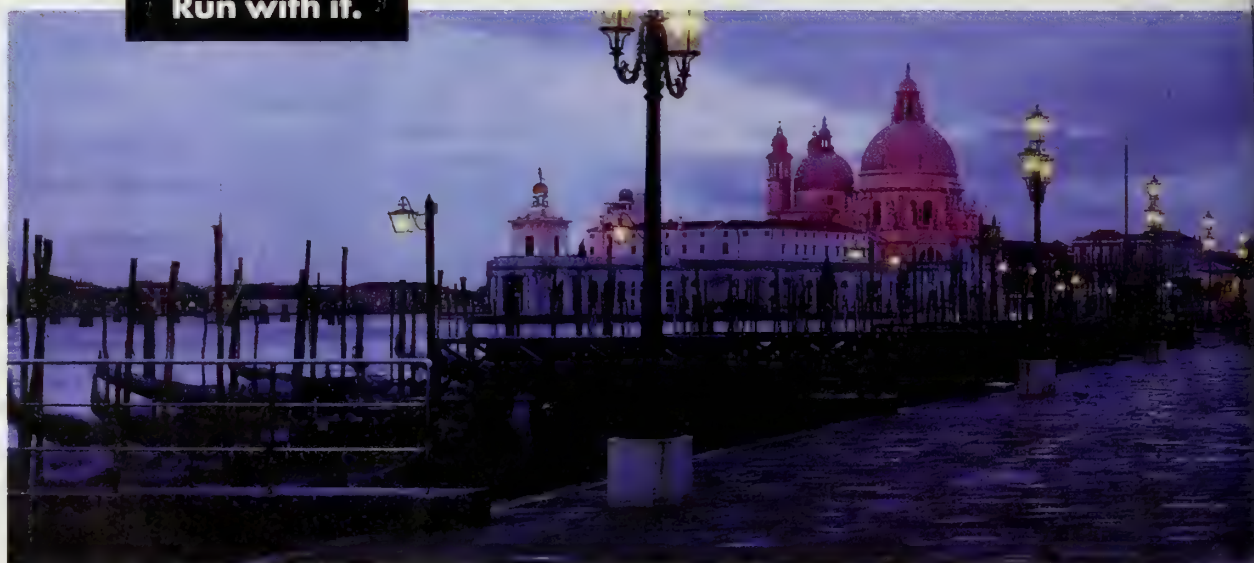
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A CLEARING IN THE DISTANCE

Frederick Law Olmsted and America in the Nineteenth Century

By Witold Rybczynski

Scribner • 480pp • \$28

THE MAN WHO BROUGHT NATURE TO THE CITY

He has been dead for nearly a century. But the continuing restoration of two of Frederick Law Olmsted's most famous creations—Central Park and Prospect Park, both in New York—makes the pioneering landscape architect a surprisingly *au courant* subject for biography. In *A Clearing in the Distance*, author Witold Rybczynski, a professor of urbanism at the University of Pennsylvania, has written a general-interest work that is unfailingly lucid and engaging—if intermittently superficial.

Rybczynski's unassuming book carries a broad subtitle that would have been better suited to a biography of Andrew Jackson or Abraham Lincoln. But if Olmsted's story hardly encompasses that of 19th century America, his was a quintessentially American life. Writing in the 1930s, the critic Lewis Mumford lumped Olmsted (1822-1903) with Herman Melville and Walt Whitman as examples of a classic mid-19th-century type: "the self-invented man." Rybczynski adds Mark Twain and Thomas Alva Edison to Mumford's list, observing that what these notables all had in common was that "the originality of their ideas was due in no small part to the unconventional course of their early lives."

Olmsted was largely self-taught, and he meandered through a series of aborted careers before discovering his true calling. But he was atypical among the self-invented in that his restlessness was not rooted in poverty. The son of a prosperous Hartford dry-goods merchant, Olmsted worked as a surveyor's assistant, spent a year as an apprentice seaman on a voyage to China, and devoted seven years of his life to farming. He first gained national renown as a journalist who astutely chronicled the antebellum South's slave economy for *The New York Times*. He

was 35 years old in 1857 when he used his budding celebrity to win a position for which he had no bona fide qualifications but, as it turned out, great aptitude: chief architect of what would become Central Park.

In designing Central Park, Olmsted deferred to his more experienced collaborator, Calvert Vaux. But while Vaux had no interest in the implementation of the park's design, Olmsted shouldered the weighty political and financial difficulties of getting Central Park built. That Olmsted was equally compelled to build parks as to design them is critical to an understanding of his genius. He disdained the notion of art for art's sake and devoted himself to pragmatic aims. He believed passionately that exposure to nature was health-giving and should not be limited to owners of private estates. In Rybczynski's estimation, Olmsted understood better than Vaux or any of his other Central Park artistic collaborators "that their common goal was neither technical nor aesthetic. It was, above all, civic and social."

Following a prolific 14-year partnership with Vaux, Olmsted went on to build a thriving practice of his own. His completed works include the U.S. Capitol grounds; the Vanderbilts' Biltmore estate in Asheville, N.C.; Montreal's Mount Royal Park; and the campus of Stanford University. Rybczynski considers it a strength of Olmsted's that he never developed a signature style. Instead, his designs tend to emerge organically from the sites themselves and maintain an enduring appeal.

Despite his practicality, Olmsted was a visionary and innovator who ventured

far beyond the realm of landscape architecture into large-scale urban planning. He developed the plan for Westchester, Ill., a 1,600-acre suburb of Chicago as well as a parkway that connected it to the city. In effect, he altered Bala's original master plan, expanding existing green areas into a citywide park system that demonstrated a "degree of sophistication in city planning previously unknown in the United States." In Buffalo, Olmsted showed how the burgeoning American industrial city could be made livable.

The author makes a number of grand claims for his subject, but offers little in the way of supporting evidence. This deficiency highlights the book's main weakness: The reader learns a great deal about the particulars of Olmsted's eventful life but not nearly enough about where he fits into the overall history of landscape design and urban planning.

Rybczynski also skips a bit too

lightly over the melancholy aspects of Olmsted's life. Some of his most ambitious designs—for example, those for Tacoma, Wash., and Bronx, N.Y.—were stillborn on his drawing board. And many of the parks that were built—notably Stanford University—were altered beyond recognition in the process. "I have done a good deal of work in my way," Olmsted lamented in the prime

of his career, "but it is constantly everywhere arrested, wrecked, mangled and misused."

Indeed, Olmsted suffered through most of his adulthood from debilitating bouts of depression of increasing severity. He spent the final eight years of his life incapacitated by what Rybczynski suspects was dementia. While *A Clearing in the Distance* is admirably free of melodrama, the author could have made more dramatic use of the suffering of this underappreciated genius, who spent his final days at a sanatorium, the grounds of which he designed but no longer recognized as his own handiwork.

BY ANTHONY BIA

Bianco lives in Brooklyn and is a fan of Prospect Park.

A CLEARING IN THE DISTANCE

FREDERICK LAW OL MSTED
and America in the Nineteenth Century



OLMSTED'S GREAT DISAPPOINTMENT WAS TO SEE OTHERS ALTER HIS GRANDEST DESIGNS

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BY LARRY ARMSTRONG

THIS BUTLER DIDN'T DO IT

Ask Jeeves, the much-hyped search engine, flunked a test others handled with ease

When I think of butlers, what comes to mind is a stoic, loyal manservant who almost invisibly runs a household, relieving his master of pesky day-to-day decisions and serving as the confidant who never criticizes. Almost invariably, he makes the right choice (except when "the butler did it"). And he speaks with a clipped British accent—when spoken to.

So when I heard a butler was available on the Internet, I had to check him out. Could he live up to the movie butlers of my youth? Who better to resolve those nagging questions I could never pose to mere friends? Such as, "Why can't I wear brown shoes with a blue suit?"

SOARING STOCK. Perhaps my expectations were too high. "Ask Jeeves" (www.ask.com) is a search engine that promises to respond to questions phrased in natural English instead of the keywords or precise Boolean expressions other search engines require. And he comes most highly recommended: When Ask Jeeves went public on July 1, shares almost quintupled.

But what a bumbling butler this is. I asked a series of questions, many of which he simply ignored, having no answer at all to offer. For some, he had the temerity to suggest that his ignorance was my fault, that I had misspelled

something, which I had not. To his credit, after he took his feeble stab at each question, he also consulted better-known search engines, though Jeeves says he filters those "finds" to get rid of irrelevant flotsam. Separately, I did searches on AltaVista, HotBot, Excite, and Yahoo! to assess Jeeves's skill. The bottom line: Jeeves was outclassed by his more mundane brethren.

My first question was: "Who is John Crean?" Crean

is the founder and former chairman of recreational-vehicle maker Fleetwood Enterprises. (He can afford his own butler.) He also has his own cooking show on public television. Jeeves drew a blank. Other search engines linked Crean to both the company and the show on their first page of results. Yahoo! produced nine correct responses.

Then I asked: "How do I make paella?" Jeeves passed on this one, too. His referrals to other search engines turned up a mixed bag of recipes, restaurants, and paella pans. By far the best results came from my separate inquiry on AltaVista, which also allows searches in question form. Its top 10 hits produced seven different recipes. That's what I asked for.

Ask Jeeves handles shopping questions slightly differently. In the movies, taking kickbacks from merchants

would be grounds for a butler's dismissal. Jeeves, however, fully admits taking fees to produce certain comparative search results. His statements are free to me, but even a stoic butler must make a living. I wanted one of those Walkman-like devices that back music downloaded from the Internet, so I asked, "Where can I buy a RealPlayer?"

WRONG AGAIN. I should have been shocked when Jeeves whisked me off to Sharper Image Web site, a purveyor of gadgets and carriage trade at prices to match. But by questioning a handsome commission, he outfoxed himself: The user merchant doesn't even carry MP3 players. Yahoo! and AltaVista provided links to shopping bot www.bottomdollar.com, which let me find the cheapest supplier. A professional butler would have known that's more my style.

Finally, I asked Jeeves how many liters are in a jeroboam, something every respectable butler should know. Jeeves produced a useless metric conversion table with no reference to wine-bottle sizes. When I typed "jeroboam" in search engines, I got various and dining links that gave the correct answer (3 or 4.5 liters, depending on whether you pour a conventional sparkling wine). At www.butlersguild.com, home of the International Guild of Professional Butlers, I found "Ask Jeeves" E-mail link presumably to a real butler for etiquette inquiries. For my question. The next day I got a listing of all bottle sizes. This Jeeves also politely admonished that while I poured from a three-liter jeroboam at table, there's a "chance" I'd ruin the table.

My advice? If you need a search engine, use a search engine. If you need a butler, find a real one. Ask Jeeves handles neither job with confidence and *savoir faire* of a professional.



Never Mind, Jeeves

Ask Jeeves, at www.ask.com, is a search engine that lets you pose questions in natural language rather than keywords.

PLUSES

No need to deal with Boolean distinctions between and/or. No need to enclose terms in quotation marks to distinguish what you are looking for.

MINUSES

Fumbled basic questions that were quickly answered on other sites. Results were sometimes skewed by fees paid by companies for prominent placement in results.

DIGITIZE. NETWORK. AUTOMATE:

HOW COLLABRIA, INC., BUILDS A BETTER, FASTER PRINTING PROCESS

Look at the magazine you're holding. Scores of unique pages. Editorial copy intermingled with advertisements from dozens of separate sources, each with its own design. Intricate graphics, rich photographs, vibrant color. A printing job as complex as one can imagine. Yet it takes less time for this magazine to go from layout to news stand than it does for most companies to procure a box of simple business cards or letterhead for a new employee.

An exceptional situation? Unfortunately not. From brochures to book-length documents, it often requires as much time to complete a commercial offset print job today as it did a generation ago.

"The desktop publishing revolution—one of the biggest technological advances in printing history—began in the early 1980s," notes Alan Hu, CEO of Menlo Park, Calif., based printing services provider Collabria, Inc. "Still, no more than one-half to one-fourth of the incoming raw materials that printers receive digitally conform to the manufacturing process. So here it is, nearly two decades later, and we have a basic process that is not yet in control."

A FINANCIAL IMPERATIVE

Collabria, an Internet-based printing service that boasts such subscribers as 3Com, Yahoo!, and E*Trade, hopes to change all this. "With the technology available today," insists Mr. Hu, "it should be as easy to complete a printing order with a notebook computer and a modem as it would be if you were standing at the print shop."

If any industry needs such efficiencies, it's the printing industry. Comprised of more than

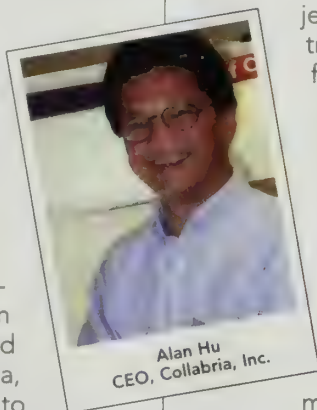
35,000 mostly small, typically resource-poor companies (none with more than 3% of total market share), with average annual billings of \$2 million and razor-thin profit margins of less than 2%, many commercial printers are struggling to reduce technology, maintenance, and training costs.

Soon, these struggles may become a financial imperative. Notes Mills Davis, Managing Director of the Digital Roadmaps Project, a Washington, D.C., based electronic commerce research firm: "The future of printing is e-business. To remain competitive, commercial printers must develop dramatic new efficiencies. And that can come only through three steps: digitize, network, and automate."

VIRTUAL MANUFACTURING

That's just what Collabria does. On average, Collabria's automated, network-enabled printing process reduces clients' printing procurement costs by 15% to 20% and cuts pre-press costs by as much as 75%. And that says nothing about the financial gains that result from having printed materials like brochures and product data sheets in employees' hands sooner.

At the heart of the Collabria System is a process that Robert Hu, Collabria's Vice President and chief visionary, describes as "virtual manufacturing." Originated in the early 1990s when he was serving as president of A&a Printing, one of San Francisco's premier commercial printing service providers, virtual manufacturing is designed to extend the manufacturing process to the very start of a print job. In effect, it allows each document creator to "take the entire printing



(Continued)

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process with them" wherever they go.

The Collabria experience begins with a Web-based interface that automates the most time-consuming aspects of the printing process. As an example, consider the basic business card. To initiate an order, an employee logs on to the Web site and inputs key administrative data, such as billing codes and order quantity. This information is routed digitally—and instantaneously—to the appropriate company official for approval.

While this is happening, the employee enters relevant personal information, such as name, title, and telephone extension, into a pre-designed layout. The employee then views a digital proof of the business card online, typeset as it will actually appear. Once proofing is complete, the order is sent, and the rest is automatic. The employee receives the printed cards within days instead of the usual weeks.

WORKING BETTER, WORKING FASTER

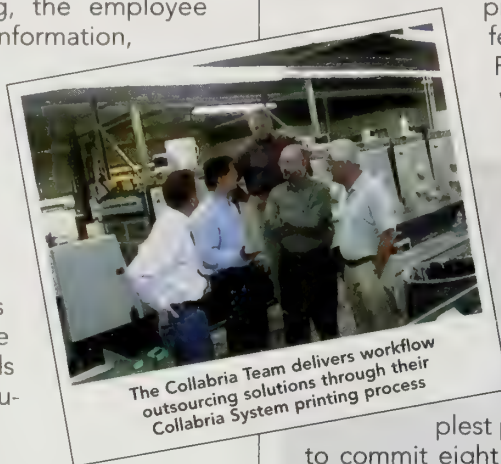
Similarly templated printing projects, like stationery and data sheets, can be handled in much the same way. Custom or one-off jobs, like brochures and advertisements, require a graphic designer, but the basic process is the same, with the Collabria System ensuring that all design elements (like color separations and fonts) are correct and in place before the order is sent.

Throughout the process, the Collabria System remains invisible to the user. The Web interface is branded with either the client's name, logo, and corporate information—so that, for instance, it appears as a seamless part of a corporate intranet—or with the name of the client's printing vendor. Printing orders are delivered directly from the printer, and all billing is executed in like manner.

If that business model sounds familiar, it should. The same approach has been employed for decades in banking, where

small local institutions have relied upon multi-company service providers like BiSys, FiServ, and Intrieve to supply transaction processing and data warehousing services. More recently, a growing number of financial institutions have built their emerging Internet banking operations around outsourced service providers like CheckFree.

Collabria's "workflow outsourcing" approach builds on these proven models. "With Collabria, the commercial printing relationship is no different than it is now," says Robert Hu. "Except that it works much better—and faster—than ever before."



FINISHING THE REVOLUTION

VIP Litho of San Francisco, Calif., one of the first commercial printers to adopt the Collabria System, has seen the proof of this promise on even the simplest printing jobs. "I used to have

to commit eight people to process business card orders," says VIP Litho Vice President John Arai. "We didn't make any money from business cards. Now, everything is automated. I have only four people assigned, and we're making \$1 million a year."

Adds Sunset Stationers, a New Jersey printer that recently began using the Collabria System: "Next year, we will look back and wonder how we ever did business without Collabria."

As such experiences accumulate—with companies learning that they can handle their core printing needs from a notebook computer even more efficiently than they can at the print shop—the printing industry at long last will be able to finish the desktop publishing revolution that began nearly two decades ago.

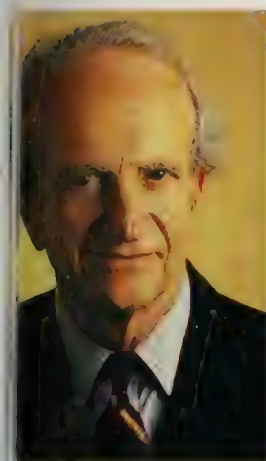
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F. A. S. BECKER

ARE WE HURTING OR HELPING THE DISABLED?



CRAP IT:
The federal
disability law
has sparked
many lawsuits
and may be
hurting
employment
for those with
physical handicaps

The Americans with Disabilities Act (ADA) of 1990 was supposed to end discrimination against disabled workers. Instead, this act has generated lawsuits that have benefited trial lawyers more than the disabled.

Employment "discrimination" against the disabled means that they receive lower earnings and suffer greater unemployment than people with equal productivity. Under this generally accepted definition, companies do not discriminate if they pay disabled persons less than others simply because they are less productive. The ADA passed without evidence of systemic discrimination against disabled workers in any way comparable to the discrimination against blacks that gave rise to the civil-rights legislation of the 1960s.

Still, the ADA had strong bipartisan support in Congress because of concern about the employment prospects of the deaf, blind, and other truly disabled. Republican Senator Robert J. Dole, who lost the use of an arm during World War II, was a strong backer.

Congress allowed the definition of disability in the act to be vague. I predicted in this magazine in 1992 that the vagueness of the ADA and the litigious nature of the judicial system would encourage lawyers and workers to widen the concept of disability to absurd extremes.

TAKING A GAMBLE. So it is not surprising that the principal "disabilities" litigated under the ADA involve workers who charge discrimination over difficulties in coping with stress, drug addiction, alcoholism, obesity, or back problems that are impossible to verify. Lawyers see an opportunity to gamble before sympathetic juries with often ridiculous types of "disability" claims—or they hope for settlements by companies frightened of potential damages.

The Supreme Court recently decided in a 7-2 opinion against one class of disability arguments that would have enormously widened the scope of the act. Some workers claimed that they were covered under the ADA even though their problems were correctable by devices such as glasses to improve vision or by medications such as beta-blockers that reduce high blood pressure. Had these workers' view of "disability" been accepted, over two-thirds of adult Americans would have fallen under the act—including the seven out of nine justices who heard this case while wearing glasses.

The truly disabled may be the principal victims of the loose definitions of disability and the extensive litigation under the act. To prevent costly lawsuits, many companies apparently avoid hiring job applicants whom they believe would prove litigious under the ADA. Such behavior would explain the otherwise surprising results in separate studies by economists Daron Acemoglu and Joshua Angrist of the Massachusetts Institute of Technology and Thomas DeLeire of the University of Chicago. They find that employment of disabled workers fell rather than rose since enactment of this law, mainly because of reduced hiring rather than greater firing of the disabled. The effect on employment was greatest in medium-size companies since small companies are largely exempt from the act.

BLOOD PRESSURE. Litigation is a bad way to determine whether companies discriminate against persons with disabilities, especially those who fall under the ever-expanding concocted concepts of "disability." Competition for workers, imperfect as that sometimes may be, is usually a much more effective way to encourage the hiring of productive employees. If some companies in a highly competitive environment earned lower profits because they did not employ persons who wear eyeglasses, take blood pressure medication, have back or hearing problems, and so forth, less ignorant and less prejudiced companies would seize the opportunity to hire these workers in order to raise their own profits.

The U.S. is not alone in greatly widening the definition of disability. The fraction of men and women who claim some disability has grown sharply during the past two decades in most European nations, even though people have become healthier and jobs have become less physically demanding. In the Netherlands, probably the most extreme example, 13% of the working-age population is considered partially or wholly disabled, and about one-third of men aged 55 to 64 collect a disability benefit.

The Americans with Disabilities Act is a misguided attempt to help the disabled, and the problems it created are getting worse as lawyers find new issues to litigate. Clearly, the scope of the act should be radically narrowed. But that may not be enough. Truly disabled workers might be better off if the ADA were scrapped altogether.

G. S. Becker, the 1992 Nobel laureate in economics, is at the University of California, Berkeley, and is a Fellow of the American Academy of Arts and Sciences.



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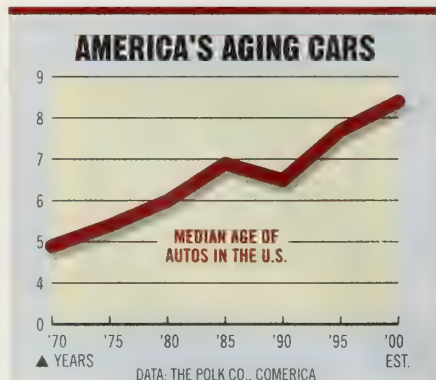
BY LAURA COHN

CAR SALES: STILL VROOMING

Next year could set a record

With 1999 the sixth consecutive year for strong auto and light truck sales, many economists are looking for consumers to take a breather. But the red-hot auto market shouldn't cool off anytime soon, argues David L. Littmann, chief economist at Comerica Inc., a Detroit-based bank. Littmann predicts that the combination of an aging auto fleet, falling car prices, and a robust economy will push total unit sales up from an expected 16 million units this year to 16.5 million units in 2000. That would surpass 1986's record of 16.3 million.

Part of the strong demand is due to the need to replace old vehicles. Despite the buying binge of recent years, Littmann estimates that by next year, consumers will have owned their cars for a median of 8.4 years, up from 7.7 in 1995. In part, that's because vehicles have become more reliable. But it's also



true that the economic boom has lasted long enough that vehicles bought early in the expansion are now ready to be replaced.

Equally important, Comerica's auto-affordability index shows that motor vehicles are at their most affordable level for U.S. consumers in 19 years. That's due partly to falling prices: New-car and truck prices fell 0.1% from last year, despite the strong demand. Competition, rising productivity, and the declining costs of raw materials such as steel have helped hold the line on auto prices.

The other powerful driver behind the robust demand for autos is income growth. Comerica estimates that real disposable income must rise by at least

2.7% annually for consumers to keep buying autos at the current pace. Real income grew 4.6% in the first quarter of this year and should rise at least 3% next year, Littmann says. Adding to the expected strength: reviving economies overseas that will buoy auto exports from the U.S.

A CASE OF FALSE MODESTY

Why earnings estimates are low

Companies in the U.S. are more likely to lowball expectations of future earnings than are companies in other nations, according to a study by Lawrence D. Brown of Georgia State University and Huong Ngo Higgins of Worcester Polytechnic Institute.

After examining the corporate reporting practices of 14 nations during 1995-1997, Brown finds that U.S. companies tend to play what he calls the "profit surprise game" to create "a little bit of good news" for the stock price. A separate study Brown conducted of earnings-release practices only in the U.S. found that managing earnings expectations has become more pervasive over time, particularly for high-growth companies.

Moreover, compared with businesses in other countries, U.S. companies are also more likely to warn investors of the possibility of a bad earnings report. This is done to "prevent managers from getting sued if they withhold bad news from investors," Brown says. As a result, when unexpected losses do occur, only 47% of those that happen in the U.S. are "extreme" (defined as a shortfall in annual earnings per share larger than 4% of the stock price). By comparison, in the 13 other countries studied about 70% of unexpected losses were extreme.

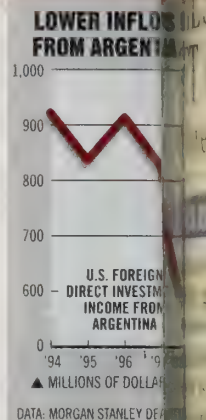
NO NEED TO CRY OVER ARGENTINA

U.S. stocks won't be hurt much

Argentina, Latin America's second-largest economy, is heading into a deep recession this year, but don't look for much impact on the U.S. stock market. Despite its size and proximity, Argentina no longer figures prominently into the bottom line of many U.S. companies, note analysts at Morgan Stanley Dean Witter in New York.

As recently as 1996, U.S. companies earned nearly a billion dollars from operations in Argentina. But by last year, that figure had declined by one-third. Now, Argentina makes up just 5.4% of the income U.S. affiliates receive in Latin America, down from a peak of 8.6% in 1991, according to Joseph P. Quinlan and Andrea L. Prochniak, economists at Morgan Stanley.

To be sure, some industries, including food and beverage manufacturers, are still vulnerable to Argentina's woes. But Argentina's gross domestic product contracts by 3.5% in 1999, as the Morgan Stanley economists now expect the overall damage to U.S. companies should be small.



WOMEN SHUN THE 'DISMAL SCIENCE'

They opt for law and medicine

While women make up 46% of first-year law school classes and 42% of medical school graduates, their showing in the economics profession is much smaller. Only about 2% of PhDs in economics granted in 1997 were earned by women. That's down from 26% in 1995, and an impressive 3% in 1993.

It's not easy to explain such a decline. Nevertheless, participants at a recent forum on economic literacy sponsored by the Federal Reserve Bank of Minneapolis came up with three hypotheses. First, economics doesn't seem to have as much "real-world appeal" as law and medicine do. Second, women have traditionally tended to lean away from mathematically oriented fields such as economics. Finally, the growing presence of female role models in law and medicine—especially those featured on TV—could be making these professions more attractive to women.

Of course, there's another possibility that wasn't raised at the forum: The dismal forecasting record of economists in recent years may have soured women on the profession.

AMES C. COOPER & KATHLEEN MADIGAN

THESE GROWTH FIGURES WON'T SET OFF ANY ALARMS AT THE FED

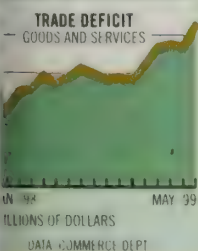
Lower pace of GDP should help to postpone another rate hike

U.S. ECONOMY

It's time to take another look at the economy's speedometer. Commerce Dept. will give us the latest reading on economic growth when it reports on second-quarter domestic product on July 29. The data come at a critical time: Given its June 30 rate hike, the Federal Reserve is becoming increasingly uncomfortable with the economy's 4% clip. So the financial markets will be looking for signs that growth is slowing down, which would reduce the need for further rate hikes.

Based on available monthly data, second-quarter GDP is likely to be market-friendly. The economy appears to have grown at an annual rate in the neighborhood of 4.3% in the first quarter and 6% in the fourth quarter of last year. More important, it would be in line with the speed of growth that Chairman Alan Greenspan has hinted is close to the Fed's comfort zone.

A HUGE DRAG ON SECOND-QUARTER GROWTH



Consumer spending appears to have slowed after a moderate first-quarter performance. Rounding out the picture, inventories appear to have grown at a slower pace than their first-quarter pace, resulting in a small drag.

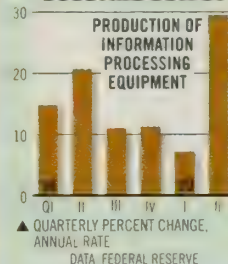
DESPITE THE LIKELY SLOWDOWN

in the top-growth number, a closer look at the components of economic growth suggests that the economy still has plenty of momentum heading into the second half. Most of all, consumer spending slowed from its breakneck 6.7% growth rate in the first quarter to a still-robust pace of about 4.5%, led by another good show-off for big-ticket durable goods and solid growth in services. The annual growth trend in consumer outlays runs about 5%, and that is unlikely to change anytime soon, given strong gains in jobs and income, record stock prices, and easy credit.

The other big gainer last quarter was capital spending on business equipment, where growth appears to have accelerated sharply, probably to a pace about double the first quarter's 9.5% growth rate. The spurt was almost certainly fueled by a surge in high-tech spending, as businesses address needs related to the Year 2000 computer problem. Industrial production of information-processing and related equipment soared at an annual rate of 30% last quarter, the largest quarterly increase in 15 years (chart).

Companies are likely to "lock down" their high-tech budgets as yearend approaches, when they will sit back and assess the effectiveness of their past Y2K spending, along with any additional needs in the new year. This may result in a possible drag on capital outlays toward yearend. Some of that impact on overall economic growth, however, will be offset by some companies' efforts to build up inventories in case of supply disruptions caused by the Y2K problem. But the capital-spending outlook remains sound, mainly because companies are awash in cash, thanks in part to this year's improved profit performance (page 28).

Y2K SPENDING IS BOOSTING OUTPUT



SECOND-QUARTER GDP

will not look as strong as the vibrancy in consumer and capital spending suggests, however, because a lot of that demand was satisfied by foreign producers, as the May trade deficit clearly showed. The trade gap, including both goods and services, hit a record \$21.3 billion in May, up sharply from \$18.6 billion in April. May exports fell by \$619 million, while imports jumped \$2.1 billion, the largest increase in more than a year.

Depending on what the Commerce Dept. assumes for June data, which will be unavailable in time for the GDP report, the GDP measure of the deficit appears to have widened from \$303.6 billion in the first quarter to about \$340 billion last quarter. That's enough by itself to subtract some two percentage points from GDP growth. While imports continue to grow broadly, demand for foreign-made capital goods has been accelerating this year, offering more evidence of Y2K-related spending.

The import surge is overshadowing some good news

on the trade front: Export growth is starting to pick up, as growth in the rest of the world begins to strengthen. Prior to the Asian meltdown in mid-1997, inflation-adjusted exports of goods were growing at 27% annually, but by mid-1998, foreign shipments were down 3.2% from their year-earlier level. Pickups in demand from both Asia and Europe have helped bring about a turnaround. In May, exports were up 8.7% from a year ago. As a result, factory output in the second quarter posted its strongest increase in more than a year, adjusted for last year's strike at General Motors Corp.

ANOTHER SMALLER DRAG on second-quarter growth was construction. Both business construction and homebuilding appear to have declined slightly. That weakness, however, mainly reflects a payback for the weather-related surge in building in the first quarter, when the unusually warm winter exaggerated the strength in many of the figures. Residential construction jumped 15.4% in the first quarter, reflecting big gains in housing starts earlier in the year.

Homebuilding is not really as weak as the GDP data will portray, although construction activity does appear to be topping out. Housing starts continued their volatile monthly pattern so far this year, as June starts dropped 5.6%, reversing a similar-size rise in May. Through the ups and downs, starts in the first half of 1999 are running slightly above

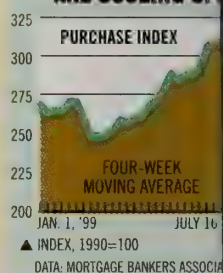
their average in the second half of

Although peaking, housing activity remains at a high level. The homebuilders' index of market conditions, including current and expected sales and traffic through model homes, dipped to 74% in June, down from 77% in May. The index gauges the breadth of improvement in conditions, based on a survey of the National Association of Home Builders. The reading was close to the average level in the first half of the year and only slightly below the record in the fourth quarter of last year.

A full percentage point increase in fixed mortgage rates in recent weeks is sure to curtail demand in coming months. Already the trend in mortgage applications to buy a home has turned down (chart). Still, strong job markets and wealth gains should keep homebuilding from falling off sharply.

Of course, if the Fed feels the need to lift interest rates again, housing will be one of the first sectors to suffer. The second-quarter GDP, however, is likely to look strong enough to allow the Fed time to sit back and see how the economy develops in the second half, before it has any urgency for another rate hike.

MORTGAGE APPLICATIONS ARE COOLING OFF



CANADA

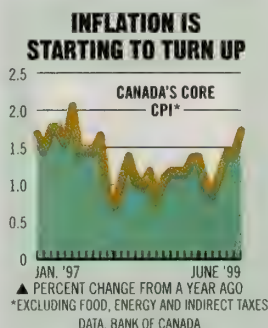
A GLEAM OF NORTHERN LIGHT

The outlook for the Canadian economy has brightened, but the inflation picture looks a bit dimmer. At the end of 1998, global financial turmoil had threatened to push commodity prices even lower, further hammering Canada's resource industries. Meanwhile, growth prospects were ebbing in the U.S., the destination of 85% of Canada's exports.

Now, thanks to unflagging U.S. growth, a better global outlook, firming commodity prices, and five cuts in interest rates since fall, 1999 growth is expected to match—or exceed—last year's 3.1% pace. Canada's real gross domestic product rose at a 4.2% annual rate in the first quarter, after a

4.8% spurt in the previous quarter, and the second quarter is off to a solid start.

Some of the rapid pace is simply a rebound from weakness in mid-1998, when growth slipped to



only 1.8%, especially after the end of the strike at General Motors Corp. But April's surprisingly strong GDP growth suggests little, if any, slowdown in the second quarter.

The primary growth engine will be exports. Reflecting strong overseas sales

and tepid home demand for imports, the May trade balance was in surplus to the tune of C\$2.44 billion (U.S. \$1.64 billion). The outlook for domestic demand is more iffy. Labor markets still

show slack, and household income growth is lagging behind the pace of spending. Nevertheless, strong auto sales and housing starts in June suggest continued vigor in big-ticket purchases.

Given the economy's firmer footing, analysts are revisiting the inflation outlook. Core inflation, excluding energy, food, and some taxes, rose to 1.7% in May, up from less than 1% earlier this year (chart). Wage growth in collective bargaining agreements accelerated to 2.3% in April and May, up from 1.5% in the first quarter. And more recently, Air Canada's flight attendants won a 5% first-year wage hike as part of a 12% three-year settlement. These patterns put pressure on the Bank of Canada to match any further rate hikes by the Federal Reserve in order to buoy the Canadian dollar.



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THIS ECONOMY HAS

A tank full of corporate cash could keep the expansion going

This late in a business cycle, it should be time for cost pressures to increase, productivity gains to slow, and profits to evaporate. Certainly, that's the traditional squeeze play investors seem to be bracing for in the second half of this year.

But there's another economic axiom to keep in mind: Cash is king. And U.S. corporations, large and small, are awash in the stuff. After the stunning profits of the second quarter (page 31), they're carrying a record \$851 billion in retained earnings on their books. And depending on how Corporate America spends this windfall, the nine-year-old expansion could keep going a while longer.

The key will be whether companies keep using their cash to invest in new equipment that pumps up productivity and in deals that promote efficiency. If so, Wall Street can look forward to more record earnings and a continuation of low inflation. But if they squander the cash on ill-advised acquisitions, or if they get lax in controlling costs, profits could tumble. "Low inflation gives businesses a big incentive to invest in productivity-enhancing machinery, since cost-cutting, not price increases, is the way to boost profits," says Prudential Securities Chief Economist Richard D. Rippe.

SPEED BUMP? The question is: Will companies do the right thing? They will be under tremendous pressure from all sides. First, the current consensus view among economists is that gross domestic product growth will slow to around 3.1% in the second half, down from a projected 4% in the first half. That slowdown will inevitably put pressure on revenues and cause some companies to trim expansion plans. In addition, the possibility exists that the Federal Reserve could hike short-term rates one



FUEL INJECTION

time to slow growth even further. In such an environment, managements may not be lured into deals that simply pick up the revenue volume. The other pressure on earnings comes from the cost side, where tight labor markets threaten to ignite inflation. Lately, wage increases have been under control despite 4.3% unemployment, but many types of workers can command high salaries. Overall, however, companies have not let up in the effort to cut costs through restructuring and downsizing. Despite the sizzling economy, layoff announcements are hitting record levels (page 31).

The key gauge to monitor, however, is capital spending. "This is where we see the technological advances and productivity increases that bring only a boost to the economy," says a Standard & Poor's analyst. Equipment spending triggers a virtuous cycle. New machinery boosts productivity and lowers labor costs, generating more profits that are then spent on even more machinery. Business equipment output grew strongly in the second quarter on top of a 5% annualized gain in the first. Some 55% of that

spending is going to high tech. A chunk of that is devoted to heading off Y2K problems, but most is targeted for new items designed to raise efficiency or trim up sales.

That certainly is the game plan at 3M Inc., a holding company with operations that include the maker of Rustum and Day-Glo paints. Over the last two years, the \$2 billion Medina (Ohio) company has spent \$20 million on information technology. The most recent investment was \$2.5 million for an Internet system that allows industrial customers and retailers to order RPM products on the Web. RPM Executive Vice-President Frank C. Sullivan recognizes the profit potential of the company's \$40 million cash balance. "All of our cash-based investing just leads to more growth and cash," he says.

Ask Wal-Mart Stores Inc. Convinced

that consumer demand will remain strong, the retail giant has upped its capital budget to \$4.9 billion from \$4.5 billion in 1998. It's building six new food distribution centers and four for handling general merchandise. The food centers support Wal-Mart's rapid expansion into supercenters offering both groceries and general merchandise. The goal is to have each supercenter—150 of which will be built this year in the U.S.—relatively close to a distribution center to speed up the replenishment of merchandise and reduce out-of-stock goods. Such investments are one reason why Wal-Mart's sales and earnings are booming. Revenues are expected to climb about 14% this year, to \$157 bil-

lion in 1999. GM smooth earnings when the auto boom slows. J. Michael Losh, GM's chief financial officer, notes that GM's \$14.7 billion cash cushion lets the company "remain nimble and quick" to grab new opportunities.

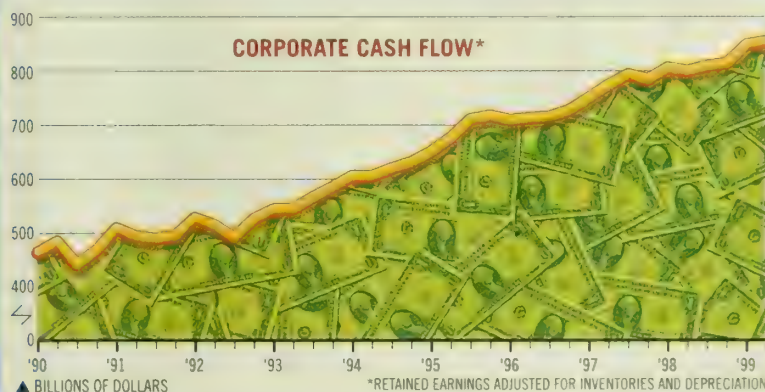
SLIM DIVIDENDS. Stock buybacks are another option for cash-rich companies. GM, Microsoft, and Wal-Mart have all repurchased shares over the past year. The reason for the buybacks? By reducing the supply of shares on the market, a company can increase its stock price. Corporations are also motivated to repurchase their shares so they can have enough on hand for stock-swap deals or to cover stock-options plans.

Investors hoping for fatter dividends

SWIMMING IN IT

In the second quarter, corporate America's retained earnings hit a record \$851 billion

DATA: STANDARD & POOR'S DRI



▲ BILLIONS OF DOLLARS

*RETAINED EARNINGS ADJUSTED FOR INVENTORIES AND DEPRECIATION

lion, with profits up 21%, to \$5.3 billion.

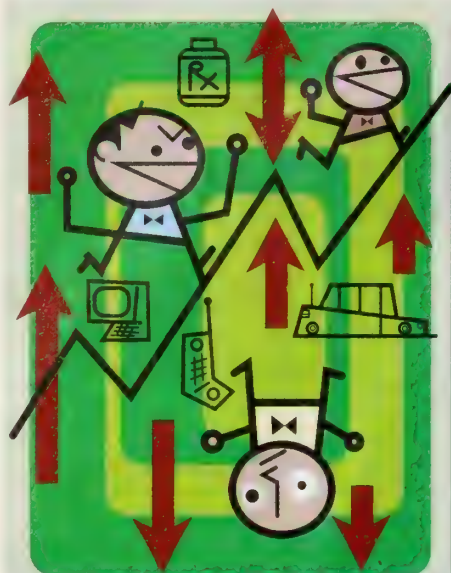
Companies rolling in dough are also doing deals. Lots of them. Microsoft is using its stash to buy into the telecommunications and cable marketplace. The software company invested \$5 billion in AT&T and spent an additional \$600 million on Nextel Communications Inc., a wireless communications outfit. The company has already spent roughly \$7 billion on such investments this year, but still has \$22 billion on hand.

General Motors Corp. has also been on a shopping spree of cash and cash-and-stock deals. Its Hughes Electronics Corp. subsidiary bought Primestar and United States Satellite Broadcasting Co., while GM's finance arm, General Motors Acceptance Corp., is purchasing Bank of New York's asset-based lending and factoring operations. Analysts are applauding these buys, which will help

from all this cash may be disappointed, though. With so many other uses for money, few companies have upped their payouts. Standard & Poor's Corp., a unit of The McGraw-Hill Companies, tracks dividend announcements in its weekly newsletter, *The Outlook*. For the second quarter, 407 companies announced dividend hikes, but that number was down 23% from a year earlier. Managing Editor Joseph Tighe says that today's shareholders are happy with their soaring stock prices, so they aren't pressuring companies to lift payouts.

Further gains in stock prices seem assured if companies continue to invest their dollars wisely. And as long as the roaring tides of money flow into a sea of greater prosperity, Corporate America is sure to float along and enjoy the ride.

By Kathleen Madigan in New York, with bureau reports



PROFITS

TECH SETS A FAST PACE

Second-quarter earnings race to a stunning 21% gain

Strong earnings growth was expected, and so far, that's what we've got. The 116 companies in BUSINESS WEEK's flash report on second-quarter profits raced to a 21% gain, as revenues climbed 9%. Tech companies did much of the heavy lifting this quarter, including IBM (+65%), Microsoft (+62%), and Intel (+49%). Also helping were sizzling gains at GM (+467%), Time Warner (+487%), and Texas Instruments (+656%). On the down side: Ameritech (-52%), Coca-Cola (-21%), and Caterpillar (-37%). But the trend is double-digit growth in profits, and that will likely remain true even after more companies report.

*Compiled by Frederick F. Jespersen
in New York*

	CURRENT QTR. SALES (MILLIONS)	% CHG.	QTR. PROFITS (MILLIONS)	% CHG.	EST. EPS (5/13)	REPORTED EPS
INDUSTRIALS						
ABBOTT LABORATORIES	3,243.2	+6	642.7	+10	0.42	0.42
AK STEEL HOLDING	682.6	+12	19.9	-40	0.39	0.33
ALCOA	4,032.7	+12	240.0	+16	0.66	0.64
ALLIEDSIGNAL	3,818.0	-1	400.0	+14	0.69	0.71
AMERICAN HOME PRODUCTS	3,319.3	-1	398.7	-24	0.41	0.30
BESTFOODS	2,154.9	+1	176.0	+2	0.62	0.61
BOEING	15,132.0	+13	701.0	+172	0.47	0.75
BRISTOL-MYERS SQUIBB	4,920.0	+11	952.0	+14	0.47	0.47
CASE	1,470.0	-15	36.0	-71	0.46	0.46
CATERPILLAR	5,101.0	-9	283.0	-37	0.87	0.78
COCA-COLA	5,379.0	+4	942.0	-21	0.41	0.38
COLGATE-PALMOLIVE	2,285.0	+1	228.1	+12	0.35	0.36
CONAGRA†††	6,013.2	+1	-141.3	NM	0.41	0.41
CROWN CORK & SEAL	1,997.4	-11	99.6	-21	0.92	0.77
DANA	3,441.0	+5	190.2	+19	1.17	1.14
DELPHI AUTOMOTIVE SYSTEMS	7,683.0	+9	394.0	+375	0.65	0.69
DIAMOND OFFSHORE DRILLING	215.3	-33	53.2	-52	0.36	0.37
DOVER	1,077.8	+7	93.3	+10	0.40	0.44
EASTMAN KODAK	3,610.0	+2	491.0	-1	1.51	1.52
EXXON	29,422.0	0	1,205.0	-26	0.65	0.49
FORD MOTOR	42,282.0	+13	2,338.0	-2	1.92	1.89
GENERAL ELECTRIC	27,410.0	+9	2,820.0	+15	0.84	0.85
GENERAL MOTORS	45,067.0	+21	1,734.0	+467	3.05	2.66
GEORGIA-PACIFIC GROUP	3,807.0	+16	212.0	+607	0.58	1.20
GILLETTE	2,414.0	+4	300.0	-19	0.29	0.26
GOODYEAR TIRE & RUBBER	3,048.7	-3	65.7	-67	0.87	0.41
GUIDANT	603.5	+24	93.8	+19	0.33	0.31
GULFSTREAM AEROSPACE	707.8	+27	69.8	+26	0.91	0.95
HASBRO	874.6	+53	32.3	+492	0.10	0.16
IBP	3,478.5	+4	66.2	+96	0.58	0.71
ILLINOIS TOOL WORKS	1,624.2	+14	199.8	+14	0.78	0.79
INTERNATIONAL PAPER	6,000.0	+3	-58.0	NM	0.21	0.24
JOHNSON & JOHNSON	6,854.0	+19	1,155.0	+15	0.82	0.84
LILLY (ELI)	2,341.6	+9	576.4	+17	0.51	0.52
LOCKHEED MARTIN	6,203.0	-5	-41.0	NM	0.78	-0.11
MAYTAG	1,085.4	+6	88.2	+30	0.95	0.97
NIKE†††	2,182.3	-5	94.4	NM	0.38	0.33
OCCIDENTAL PETROLEUM	1,647.0	+7	12.0	-94	-0.01	0.03
PEPSICO	4,982.0	-5	743.0	+50	0.30	0.31*
PFIZER	3,779.0	+14	729.0	+23	0.17	0.18
PHELPS DODGE	691.1	-13	-57.5	NM	0.07	-0.99
PHILIP MORRIS	19,810.0	+4	2,030.0	+17	0.86	0.84
POLAROID	486.8	+5	14.8	+22	0.34	0.33
PPG INDUSTRIES	1,947.0	-3	184.0	-8	0.98	1.05
ROHM & HAAS	1,144.0	+16	-9.0	NM	0.66	0.67
SCHERING-PLOUGH	2,451.0	+15	547.0	+23	0.36	0.37
SHERWIN-WILLIAMS	1,384.1	0	107.6	+8	0.62	0.63
TIMKEN	636.1	-9	12.3	-68	0.43	0.20
TRW	4,785.4	+58	139.8	+11	0.98	1.14
TYCO INTERNATIONAL††	5,819.8	+18	699.4	+75	0.77	0.84
UNITED TECHNOLOGIES	6,041.0	+4	417.0	+25	0.41	0.83
VF	1,364.8	+1	79.6	-8	0.76	0.64
WHIRLPOOL	2,617.0	+1	99.0	+22	1.20	1.30
SERVICES						
ALLSTATE	6,592.0	+1	770.0	-13	0.82	0.95
AMR	5,011.0	+2	268.0	-34	2.00	1.70
AVIS RENT A CAR	637.5	+11	27.3	+22	0.73	0.85
BANK OF AMERICA	NA	NA	1,915.0	-17	1.13	1.07
BANK ONE	NA	NA	992.0	+11	0.93	0.93*
BURLINGTON NORTHERN SANTA FE	2,194.0	0	238.0	-14	0.62	0.50
CAPITAL ONE FINANCIAL	949.8	+58	87.5	+31	0.41	0.41

	CURRENT QTR SALES (MILLIONS)	% CHG.	QTR PROFITS (MILLIONS)	% CHG.	EST EPS (5/13)	REPORTED EPS	DIFF
MANHATTAN	NA	NA	1,393.0	+30	1.29	1.55*	+0.26
P	20,436.0	+2	2,448.0	+9	0.64	0.72	+0.08
SPORTATION	1,361.6	+14	48.8	+18	0.75	0.86	+0.11
ION, LUFKIN & JENNETTE	2,600.1	+11	165.7	+16	0.82	1.14	+0.32
ES	510.6	-15	57.2	NM	0.60	0.62	+0.02
	9,672.0	+48	222.0	+53	0.51	0.54	+0.03
GROUP††	175.7	+130	-24.2	NM	-0.09	-0.10	-0.01
	4,383.0	+7	221.0	+29	0.69	0.73	+0.04
ION	NA	NA	873.0	+251	0.97	0.90	-0.07
ANCIAL GROUP	NA	NA	450.0	+15	0.73	0.76	+0.03
	1,343.3	+3	277.0	+24	0.86	0.98	+0.12
	1,167.4	+11	87.9	+17	0.78	0.81	+0.03
T INTERNATIONAL	2,042.0	+6	114.0	+13	0.42	0.42	—
	NA	NA	227.2	+32	0.26	0.27	+0.01
HILL	922.7	+5	90.0	+16	0.44	0.45	+0.01
LYNCH	8,916.0	-7	673.0	+23	1.31	1.57	+0.26
(J.P.)	NA	NA	504.0	+5	2.14	2.52	+0.38
STANLEY DEAN WITTER	9,054.0	+7	1,151.0	+35	1.40	1.95	+0.55
L CITY	NA	NA	354.5	+7	1.12	1.12	—
IK TIMES	779.4	+4	83.5	+1	0.45	0.47	+0.02
EPOT	2,343.0	+13	74.1	+10	0.21	0.19	-0.02
Y EXPRESS	621.1	+2	7.6	+44	0.38	0.40	+0.02
	6,337.0	+13	236.4	+22	0.44	0.46	+0.02
(CHARLES)	982.1	+54	151.0	+98	0.16	0.18	+0.02
IT BANKS	NA	NA	293.7	+8	0.95	0.91	-0.04
RNER	3,574.0	-3	593.0	+487	0.09	0.43	+0.34
RE PROPERTY CASUALTY	2,634.8	+4	354.3	+13	0.86	0.91	+0.05
GLOBAL RESTAURANTS	1,886.0	-6	179.0	+60	0.75	0.60*	-0.15
	4,541.0	+2	672.0	+138	3.16	5.80	+2.64
HTWAYS	548.9	+23	26.3	+46	0.78	0.96	+0.18
	3,003.3	+8	59.3	NM	0.09	0.08	-0.01
ARGO	NA	NA	931.0	+29	0.54	0.55	+0.01
NOLOGY	55,542.9	+17	6,734.8	+134	0.45	0.51	+0.06
ED MICRO DEVICES	595.1	+13	79.9	NM	-0.34	-1.10*	-0.76
A ONLINE†††	1,377.0	+46	160.0	NM	0.11	0.13	+0.02
	820.5	+25	267.6	+24	0.46	0.50	+0.04
OMPUTER††	1,558.0	+11	203.0	+101	0.63	0.69*	+0.06
ER ASSOCIATES†	1,222.4	+17	-431.9	NM	0.82	0.49*	-0.33
	1,291.8	+36	288.9	+52	0.24	0.27	+0.03
ECH	373.3	+51	-923.2	NM	0.41	0.55*	+0.14
ELL	2,139.6	+5	140.3	+12	1.07	1.09	+0.02
ELECTRONICS	1,776.0	+30	92.3	+65	0.07	-0.23	-0.30
	21,905.0	+16	2,391.0	+65	0.88	1.28	+0.40
	6,746.0	+14	1,749.0	+49	0.54	0.51	-0.03
FT†††	5,764.0	+39	2,202.0	+62	0.36	0.25	-0.11
LA	7,513.0	+7	206.0	NM	0.40	0.33	-0.07
STRUMENTS	2,346.0	+8	325.0	+656	0.73	0.80	+0.07
	115.2	+156	-15.1	NM	0.09	-0.07	-0.16
IES & TELECOM	43,346.3	+11	5,113.9	-1	0.44	0.47	+0.03
ECH	4,802.0	+12	819.0	-52	0.71	0.74	+0.03
LANTIC	8,295.0	+5	1,173.0	+14	0.75	0.74	-0.01
UTH	6,148.0	+9	980.0	+20	0.47	0.51	+0.04
IA ENERGY GROUP	1,691.2	+28	26.1	+14	0.28	0.32	+0.04
INTERNATIONAL	2,116.0	+9	137.9	-11	0.41	0.37	-0.04
TECHNOLOGIES††	9,315.0	+22	750.0	+45	0.23	0.24	+0.01
COMMUNICATIONS	793.1	+88	-267.7	NM	-1.34	-1.27*	+0.07
MMUNICATIONS	7,395.0	+5	1,176.0	+15	0.58	0.59	+0.01
RM	2,791.0	-4	319.6	+15	0.40	0.45	+0.05

NA=not available NM=not meaningful † First-quarter results †† Third-quarter results ††† Fourth-quarter results

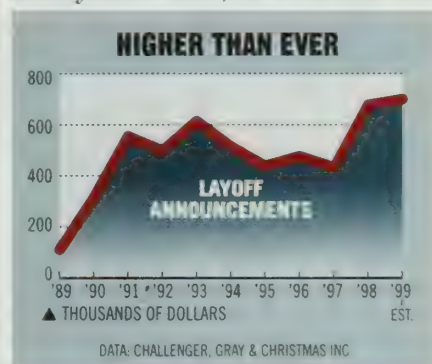
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DOWNSIZING

GO AHEAD, LAY ME OFF

Losing a job is no big worry in today's growing economy

Are companies totting up big earnings gains through layoffs? That would seem to be the case, according to a widely watched survey by outplacement consultants Challenger, Gray & Christmas Inc. Its latest report showed announced layoffs up 42% in the first six months and, if the pace keeps up, layoffs will exceed 700,000, setting a record for this decade. "The rate of churning will intensify as Corporate America responds with increasing speed to new product introductions, global competition, and Wall Street's emphasis on quarterly profits," says Jeffrey A. Joerres, chief executive of



temporary help firm Manpower Inc.

It's no picnic for workers, but the restructuring helps profits and ultimately the economy. And companies still hire. Only, as they strive to become more efficient and globally competitive, they look for workers with different skills. And with unemployment at just 4.3%, the displaced are easily reemployed—93% at the same or better compensation. The Bureau of Labor Statistics reports that the average number of weeks a worker remains unemployed has dropped to an annualized 13.6 through June, compared to 14.5 in 1998. "Job creation and job destruction are one of the upsides of the U.S. economy," says Ezra D. Greenberg, senior economist at Standard & Poor's DRI.

What's more, multinationals, such as Procter & Gamble and Gillette Co., have been increasingly inclined to do their layoffs overseas. So U.S. companies reap the profits and Americans keep the jobs.

By Richard A. Melcher in Chicago



COMPUTERS

CAN STEVE JOBS KEEP HIS MOJO WORKING?

First the hot iMac, now the iBook portable. Then what?

Can interim chief executive Steven P. Jobs provide a permanent reprieve for Apple Computer Inc.? Jobs has brought Apple back from the verge of oblivion two years ago, racking up seven quarters of profits and restoring Apple's image with the innovative iMac. Nearly two million units have been sold since iMac was rolled out last year, doubling Apple's market share. Apple stock has more than doubled to 53 since Jobs returned.

Now, it's time for his next act. On July 21, before an adoring crowd at the Macworld Expo in New York, Jobs unveiled a long-awaited notebook version of the iMac, aimed at consumers and students. The two-toned iBook—priced aggressively at \$1,599 and available in either blueberry-and-white or tangerine-and-white plastic—sports a speedy 300 MHz G3 chip, a crisp 12-inch color screen, and an optional wireless connection from the computer to the phone jack. "It's a rocket ship," Jobs brags. Slated to go on sale in September, the iBook fills in the last piece of a product road map Jobs outlined in late 1997. Its success could restore Apple's luster in portable

computers—as the iMac did on the desktop.

But is the iBook enough to sustain Apple's momentum? Most analysts think so—at least for now. Admittedly, like all computer makers, Apple is operating in a pricing environment so brutal that some PCs are now offered for free in conjunction with multiyear Internet service contracts. While \$1,200 iMac seems a bit dear today, Jobs has priced the iBook very competitively, undercutting all major rivals.

Michael K. Kwatinetz of CS First Boston figures Apple's earnings will climb 14% in the December quarter, to \$152 million, partly from anticipated strong sales of the iBook. Assuming no production snafus, Apple could sell 300,000 iBooks before yearend. In Apple's next fiscal year, ending Sept. 30, 2000,

RIDING HIGH

Despite the industry price squeeze, Jobs's iBook looks like it could score profits

Kwatinetz predicts revenue will climb 18%, to \$7.6 billion. The iBook could contribute \$800 million to that. Says analyst John Mou of BancBoston, "It will attract a new customers."

More important, it could be a new vehicle for rebuilding market share. After Apple's turnaround, the company still sells fewer than 4% of the world's PCs, says researcher Dataquest. What's more, the opportunity in portables is particularly promising: After all, in the early 1990s, Apple PowerBooks were top sellers. But Apple had quality and manufacturing problems and ceded leadership in the category to IBM and Dell. Apple share plunged to just 2.3% by 1997. **CREATING DEMAND.** Under Jobs, Apple has regained ground in traditional desktop strongholds such as graphic arts, education and rolled out pricey PowerBooks aimed at professionals. The biggest growth opportunity for today is among consumers—especially novices. The iMac has already attracted many such customers: Apple says nearly a third of iMac buyers are first-time owners. Now, with the iBook, Apple is trying to do the same for portables, where sales are growing 33% faster than sales of desktop PCs.

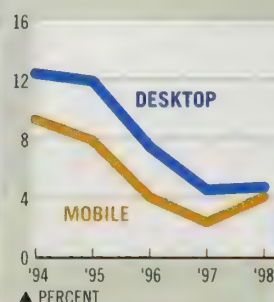
It'll take some savvy marketing, though: Of the 8.4 million portables expected to be sold this year in the U.S., says researcher International Data Corp., 90% will be bought by corporations and only 10% by consumers. The cute, easy-to-use iBook could help create a consumer market—despite grouching that this laptop at 6.7 pounds is a bit heavier than Apple-water had hoped for. At the University of Pennsylvania, for instance, information systems manager Donald J. Montabana held a spot open for the iBook in his back-to-school catalog he mails to students. Although it's shipped three months later than scheduled, Montabana expects "it will do quite well on campus." Even if the iBook smashes, Jobs still has to pull a few more bits out of Apple's momentum.

By Andy Hertzberg in San Francisco with Steve Hamm in New York

CLIMBING BACK

Apple's share of desktop and mobile PCs

DATA: DATAQUEST



By Peter Coy

TRACKING STOCKS ARE ACCIDENTS WAITING TO HAPPEN

Microsoft Corp., whose fast-rising shares have consistently outpaced the bull market, is considering a tracking stock? That would give us pause. The logic is straightforward enough: With growth rates in its core software businesses tapering off, the ascent of Microsoft shares could also slow. Why not, then, issue a stock that reflects the growth potential of its newer Internet businesses? After all, everybody's doing it.

Microsoft shares soared on reports of a tracking stock, despite the fact the company has indicated nothing will happen anytime soon. Never might be a better idea. A tracking stock would be a mistake. In fact, that's true for any company embracing the fad for tracking stocks. They are accidents waiting to happen.

Here's the problem: A company that issues a tracking stock creates a conflict for its board of directors and chronic management headaches. Why? Because the interests of the two sets of shareholders are bound to collide. In Microsoft's case, it's easy to imagine conflicts over whether to fund an operating system

(the old shares) or an Internet portal (the new shares). "It's a duty-of-loyalty bear trap," says New York Law School professor Jeffrey Haas. "You have one servant, the board, serving two or more masters."

FRIEND OR FOE? A tracking stock is a class of shares of the parent company that are linked to the performance of a particular business—usually the fastest-growing one. General Motors issued the first such shares in 1984 and 1985—"lettered" stocks for its Electronic Data Systems and Hughes Electronics subsidiaries. But it's only in the past year or so that tracking stocks have gotten hot.

Among the recent issuers: AT&T; Donaldson, Lufkin & Jenrette; and Ziff-Davis. DuPont Co. is readying a tracking stock for its life-sciences division. Others considering them are General Electric Co. and Walt Disney Co.

Tracking stocks unlock the market value of a new business, much as a spin-off would, while letting management retain control. But by keeping the tracked business in-house instead of spinning it off, the parent preserves the tax advantages and credit

and DLJdirect, there will be inherent conflicts of interest." For instance, the prospectus goes on to say, "there can be no assurance that DLJ will not expand its operations to compete with DLJdirect." Think about that: The directors supposedly looking out for DLJdirect's interests are reserving the right to compete with it.

EVERYBODY LOSES. There are more immediate conflicts as well: How much investment should go into the high-flying, cash-hungry business, vs. the cash-rich, old-line company? If you say each should stand on its own, then the fast-growing but perhaps money-losing business will

starve. But if you provide nourishment from the coffers of the mature business, shareholders of the larger company could justifiably cry foul.

And what happens if one part of the company can't pay back its loans? The other part is on the hook. "They're like financial Siamese twins, attached at the hip through their ownership by the same parent," says New York Law School's Haas.

Sound like fodder for shareholder lawsuits? It is. Delaware Chancery Court recently ruled

against holders of GM E and H shares who said that GM had treated them unfairly. The court said that since shareholders had voted for the transactions in question, the plaintiffs didn't have a case. Lawyers for holders of the former E shares are appealing, arguing that GM directors duped the shareholders.

The main reason there haven't been more lawsuits over tracking stocks is that until recently, few tracking stocks existed. That is changing, and without a doubt, train wrecks lie ahead.

Coy is associate economics editor.



CONFLICT How can the board protect the interests of two sets of shareholders when those interests are bound to collide?

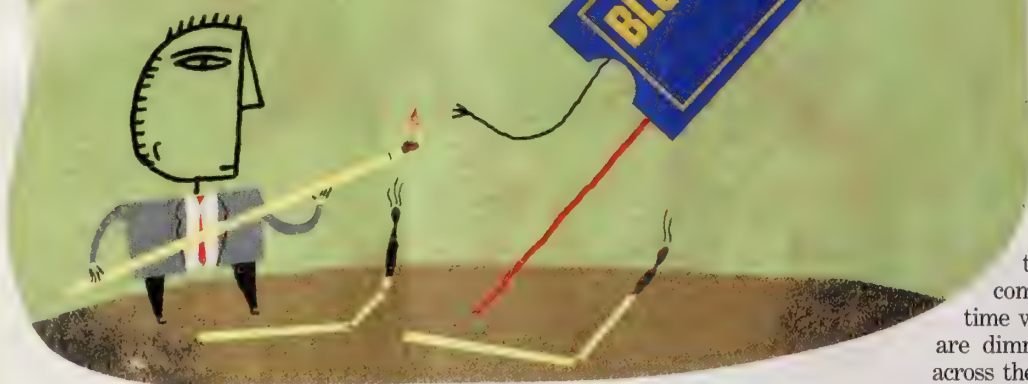
quality that come from having diversified businesses with ups and downs that aren't synchronized. Meanwhile, managers of the tracked business can be rewarded with tracking-stock options—a big issue for Disney, which has lost top executives to Internet startups. The tracking stock can also be used to make acquisitions.

But all those advantages pale beside the disadvantage posed by the board's conflicts of interest. Take this warning from DLJ's prospectus for DLJdirect: "The board of directors may make decisions that favor DLJ at the expense of DLJdirect. Due to the extensive relationships between DLJ

SPIN-OFFS

WHY IT'S NOT A BLOCKBUSTER IPO

The company is in better shape, but prospects may be dim

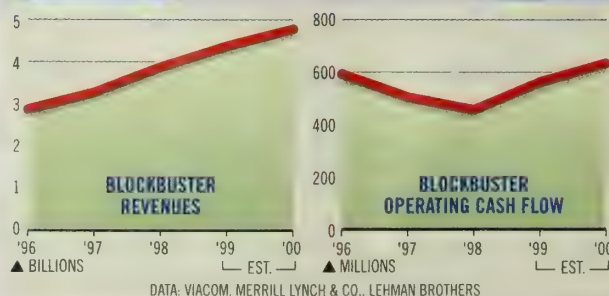


At another time, an initial public offering of Blockbuster Inc. shares might be a big event. After all, the No. 1 video-rental chain has diligently worked its way through an array of problems and turned itself from a profit drain into a profit spinner for parent Viacom Inc. In the second quarter, Blockbuster's revenue jumped 17%, to \$1 billion, while cash flow was firmly in the black at \$105 million, compared with a loss of \$359 million a year earlier. Furthermore, the 6,658-unit chain boosted its share of the home-video retail market to 31% in the June quarter, from 26% at the end of 1998.

So why is Viacom scaling back its ambitions for the Blockbuster issue as it launches the twice-delayed IPO? Blame it in part on the Internet. Spectacular returns from dozens of dot.com IPOs have made it harder for conventional companies to grab attention. The Internet is also one of the technologies—following cable and satellites—that promise to deliver movies on demand to consumers. That could make the video-rental business all but obsolete in years to come. "There's always been this technological overhang, and that overhang is only getting bigger in people's minds," says Lehman Brothers Inc. analyst Larry C. Petreila. "Blockbuster is a company with good current performance, but a company that some fear will hit a wall soon."

On July 19, Viacom's underwriters, Salomon Smith Barney and Bear Stearns & Co., set out to sell Blockbuster to institutional investors. The offering, for 17.7% of the company, is expected to be priced at \$16 to \$18, valuing the company from \$2.8 billion to \$3.2 billion. That's about half the \$5 billion to \$6 billion Viacom was hoping to fetch four months ago and a fraction of

LET'S GO TO THE TAPE



the \$8.4 billion it shelled out to acquire the company in 1994. "The valuation is a surprise," says Merrill Lynch & Co. analyst Jessica Reif Cohen. But, she surmises, "The purpose of it is to guarantee a successful [IPO] launch."

Certainly, Blockbuster is in better shape than it has been in years. After a series of failed strategies and three different CEOs, current Blockbuster boss John F. Antioco and his management

team have the chain in firm footing. The firm's chief financial officer, Larry C. Petreila, took charge in 1998 and signed "revenue-sharing" deals with major Hollywood studios that set the price Blockbuster pays for tapes from \$3 a piece to \$3-\$8. In 1998, the chain gave the studios about 40% of the rental fee it received from customers. On top of that, Antioco spent lavishly on marketing. Last year, advertising expenses were \$181 million, 30% over 1997. But they brought results: "Sales have made all the difference," says Viacom chairman Larry Haverly of Street Research.

THE SEQUEL. But not Blockbuster's problems themselves to easy fixes. Viacom is unloading Blockbuster at a time when prospects for the video are dimming. So far this year, rentals across the U.S. are down 8.4%, according to Forecaster Alexander & Associates, an entertainment-industry consulting firm. That comes on top of a 2.6% drop in 1998. One reason: movie lovers are buying tapes instead of renting. Furthermore, analysts say the jury is out on just what sort of financial impact the revenue-sharing deals will have in the long term. After adjusting Blockbuster's 1998 results for charges and accounting changes, it still posted an operating

loss of only \$65 million last year on sales of \$3.9 billion.

The gravest threat to Blockbuster comes from emerging technologies that make video-on-demand possible on cable TV, satellite, and, ultimately, the Internet. The technology has been under development

for decades, but it could finally become a reality in the next two to three years, some analysts say. By then, video-on-demand could put a noticeable dent in Blockbuster's bottom line. But if Viacom has its way, it will have nothing to do with the video rental business then: It plans to spin off the rest of Blockbuster in a sequel offering later this year.

By Stephanie Anderson Forest in Dallas

Knowledge Facilitator

Name: Kevin Marsh

Job Description: Study a company's flow of knowledge, making sure those who have it talk to those who need it.

Experience: Completed "mapping" phase of a project designed to improve the way a major software firm distributes and uses information.

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JILTED: The Farbers were dumped by their HMO

HEALTH CARE

DO MEDICARE AND MANAGED CARE MIX?

Insurers say no, but Washington is counting on it

When George Farber signed up for a Medicare plan offered by Harvard Pilgrim Health Care two years ago, "everything sounded wonderful," he recalls. The plan's coverage ranged from prescriptions to eyeglasses for the 72-year-old retired furniture-store worker and his wife, Eleanor.

But Farber no longer extols Harvard Pilgrim's virtues. First, the company limited the amount it would pay for drugs to \$800 per person annually. Then, a few months ago, it notified the Colrain (Mass.) couple that at year-end they, along with thousands of other local seniors, would be dropped. Harvard Pilgrim did so "reluctantly," says a spokesman. "It was financially untenable."

The Farbers have been caught in the middle, as Washington and health insurers wrestle with how to rein in Medicare spending. Insurers say they can't afford to provide service under

Medicare—and are lobbying fiercely for more funds. Yet Washington is counting on managed care to trim the soaring costs of Medicare, and millions of seniors—about 16% of the Medicare population—have switched to HMOs. President Clinton's Medicare reform proposal and a pending congressional plan both presume a switch from fee-for-service Medicare.

So the fact that 407,000 elderly Americans were dropped by Medicare HMOs last year looks like a bad sign. And on July 15, the Health Care Financing Administration (HCFA), which administers Medicare, announced that 327,000 more would be cut loose this year.

The cuts are "a wake-up call that this program is in crisis," says Karen M. Ignagni, president and CEO of the American Association of Health Plans.

Insurers that jumped into the Medicare HMO business trace the problems to the 1997 Balanced Budget Act. As part

of that legislation, on Jan. 1, 2000, HCFA starts cutting per capita reimbursement for HMOs whose enrollees are relatively healthy and cheap to treat. Among its other effects, the act holds annual reimbursement increases in some counties to around 2% per year. The act, says Aetna HealthCare Inc. Vice-President Dr. Sandra Harmon-Weiss, fairly keeps reimbursement increases below the rate of medical inflation. "Plans looking at the next three or four years and saying, 'We can't afford to stay in business,'" says Dr. Donald Young, medical director of the Health

Insurance Assn. This year, 41 plans are expected to withdraw from Medicare.

SCARE TACTICS. Government and industry experts counter that the industry's claims of an HMO crisis are blown. "These scare tactics are unfounded," says HCFA Deputy Administrator Michael Hash. He points out that despite the losses, insurers continue to open Medicare HMOs and seniors still join. Since January, 39 new plans and nearly 200,000 elderly have enrolled.

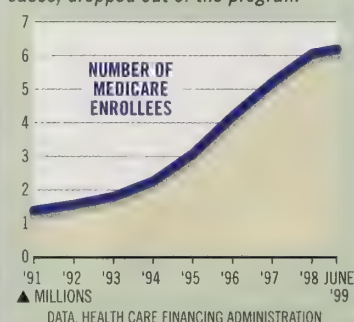
According to the General Accounting Office, the 1997 provisions merely reduce overpayments—not make Medicare HMO plans unprofitable. Plans intended to attract the healthier elderly, whose annual bills are only a fraction of the sickest 5% of seniors. Yet they have been paid per head, at a rate about 95% of the average spent on fee-for-service patients, who tend to be sicker. "There is an absolute consensus that HMOs are overpaid," says Jonathan B. Oberlander, health policy expert at the University of North Carolina. The amount: about \$2 billion per year, according to HCFA.

So will HMOs have a role in Medicare? Clearly, managed care can offer both better and less expensive care to healthy elderly, partly because of greater reliance on preventive medicine and early diagnosis. But studies show that the chronically ill may fare worse under HMOs. And the cost of their care is not lower. So when it comes to the billion-dollar question of whether managed care can curb Medicare costs, "I would bet on it," says Oberlander. That means that seniors tomorrow will probably pay more or get less.

By John Carey in Washington

CHANGE OF PACE

The rush to join Medicare HMOs has slowed as insurers have cut benefits and, in some cases, dropped out of the program



It may take a little
Courage
to ask your
doctor about
**Erectile
Dysfunction.**

But everything
worthwhile
usually does.



Bob Dole

When I was diagnosed with prostate cancer, my first concern was ridding myself of the cancer. But I was also concerned about possible postoperative side effects, like erectile dysfunction (E.D.), often called impotence. So I asked my doctor about treatment options.

I'm speaking out now in the hope that men with E.D. will get proper treatment for a condition that affects millions of men and their partners.

Most E.D. cases are associated with physical conditions or events, like the prostate cancer surgery I underwent. The most common causes of E.D. include diabetes, high blood pressure, spinal cord injury, or surgery for the prostate or colon. E.D. can also be associated with smoking, alcohol abuse, or psychological conditions such as anxiety or stress.

The good news is that many effective treatments are available for E.D. But the important first step is to talk to your doctor. Together, you and your doctor can decide which treatment is best for you.

Now it's up to you to get the treatment you need for E.D. My advice is to get a medical checkup. It's the best way to get educated about E.D. and what can be done to treat it. It may take a little courage, but I've found that everything worthwhile usually does.

For more information about erectile dysfunction, please call 1-800-433-4215.

COMMENTARY

By Paula Dwyer

GEORGE W., THE ACCIDENTAL CAMPAIGN REFORMER

When George W. Bush announced on July 15 that he was rejecting federal matching funds for next year's primaries, almost no one was surprised. As the Republican Presidential candidate explained, he already had raised a record \$37 million—\$4 million more than he would have been allowed to spend if he accepted matching dollars—and he didn't want spending caps to tie his hands while his most well-heeled GOP opponent, publisher Steve Forbes, spent freely from his huge personal bank account.

Bush's move, reformers cried, demonstrates anew that Big Money rules the U.S. election system. But the Republican front-runner did reformers a favor: He put campaign-finance reform back on the national agenda. Within days, Democratic Presidential hopeful Bill Bradley was putting the finishing touches on his own 12-point reform plan to be unveiled on July 22. Seeing an opening, Republican Presidential wannabe Senator John McCain (R-Ariz.) pounced, threatening to tie up floor votes until he won a leadership pledge to schedule debate on a version of his reform bill. Even House Speaker J. Dennis Hastert promised to bring a bill to the floor after the August recess.

If Congress wants a road-map to reasonable reform it should look beyond the boggling Bush numbers and at the primary fund-raising system itself, which could be a prototype for reform. The crucial difference between the primaries and the general elections is that in the primaries, only so-called hard money is allowed: direct donations to a candidate, limited to \$1,000 per election from each individual, or \$5,000 from a political action committee.

True, the Texan brought in a

mountain of cash under these limits by taking so-called bundling to new heights. He relied on 115 "Pioneers," super-networkers, to raise at least \$100,000 apiece by tapping associates and friends. But if a candidate raises \$1 million from 1,000 donors, that's

money was to be spent only by political parties, ostensibly for party-building efforts. But candidates often use soft money to skirt spending limits. "Soft money is the biggest loophole in the system. It gives donors extraordinary influence," says Ellen

S. Miller, executive director of pro-reform group Public Campaign. During the last Presidential cycle, soft-money spending totaled \$272 million; this time it could hit \$1 billion.

There is another reason to hope for reform. Eager to avoid scandal, the Presidential front-runners are being extra careful. Bush nixed the idea of using soft money to cover expenses for the Aug. 14 Iowa straw poll after he caught flack for the

plan. Vice-President Al Gore is so eager to avoid any echo of the '96 Clinton-Gore campaign fund-raising scandals that his people say it's bogging down their money drive—they have to get several lawyers to sign off on solicitation letters and seating arrangements at fund-raisers.

Congress should keep the candidates' feet to the fire. While GOP hard-liners are sure to object, Bush is proving that campaigns don't need soft money to win. Congress could simply extend the primary fund-raising system to the general election, allowing candidates to continue raising hard money at \$1,000 a clip. In exchange for the estimated \$68 million in public funds that nominees will get after the conventions—even Bush isn't tempted to reject that huge grant—candidates and national parties should forgo soft money. That way, Congress can make sure the campaign-reform drive outlives the primaries.

Dwyer has covered the campaign finance debate for more than a decade.



far better than accepting \$1 million from one corporate fat cat. Bush appears to have followed the law—accepting checks no greater than \$1,000 from some 80,000 individuals. His average contribution came to \$466.69. Even Common Cause acting director Donald J. Simon can't crab: "It's clean, it's from permissible sources, and it's hard money."

OUT OF REACH. In the general election, however, soft money rules and that's the source of greatest abuse. These funds are beyond the campaign laws and involve unlimited donations by individuals, corporations, and labor unions. Originally, soft

CATALYST

By raising so many millions, Bush has put campaign-finance reform back on the national agenda

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COMMENTARY

By Richard S. Dunham

ACROSS AMERICA, A TROUBLING 'DIGITAL DIVIDE'

Few would disagree that the New Economy has brought a wave of prosperity to America. But increasingly, we see that the rewards are not distributed evenly—and not just because your employer hasn't dreamed up a way to dot.com you into millionaire status. A serious "digital divide" is emerging, creating gaps between technological haves and have-nots by region, race, and socioeconomic class, according to several new studies.

The most recent: a report by the Progressive Policy Institute, the think tank of the centrist Democratic Leadership Council. The study ranks the 50 states on how well they're adapting to the New Economy. It uses criteria such as number of high-tech jobs, quality of educational technology, percentage of population online, commercial Internet domains, and available venture capital. The report identifies a clear geographic pattern: The West Coast and Eastern Seaboard from New Hampshire to Virginia are at the forefront of the 21st Century Economy. The Deep South and the upper Midwest lag far behind. The keys to success: elementary and secondary schools that prepare workers for diversified, export-focused economies, plus college research centers that provide brainpower for innovation.

ROLE MODELS. There are some unlikely success stories. Delaware and Minnesota are transforming themselves from industrial and agricultural centers into cyberfriendly domains, the PPI study says. But too many states still adhere to outdated models. "Some states still have a 1980s industrial mentality," says urban planner Robert D. Atkinson, the study's co-author. "They grab every

job they can find rather than looking to create an innovation-based economy that is going to produce higher incomes."

Laggard states should imitate those at the top. Utah Governor Mike O. Leavitt recalls how, a decade ago, the Provo-Orem metropolitan area was "absolutely in the dumps." But state policies focused on attracting software, biotech, and aerospace technology, and lawmakers poured millions into updating schools with new technology. The payoff: Utah has become home to some 2,000 high-tech companies, and the Provo-Orem area is a thriving hub for software development. The PPI ranks Utah sixth in the U.S. but third in

workforce education and fifth in education technology.

Addressing the racial and sociological divide may be far more difficult. A Commerce Dept. report, *Falling Through the Net: Defining the Digital Divide*, found that households with annual incomes above \$75,000 are more than 20 times as likely to use the Internet as those earning less than \$15,000. Single-parent households are less than half as likely to be wired as two-parent families. The disparity is even greater among African American families: Black children living with one parent are less than one-fourth as likely to have Net access as those in two-parent households.



HIGH-TECH JOBS

Percentage of all jobs

ONLINE POPULATION

Percent of adult population with Net access

R&D INVESTMENT

As a percentage of total state economy

TOP 5

NEW HAMPSHIRE	7.8%	ALASKA	52%	MICHIGAN	4.9%
COLORADO	7.5	COLORADO	47	DELAWARE	4.0
MASSACHUSETTS	7.5	MARYLAND	46	MASSACHUSETTS	3.8
CALIFORNIA	6.2	UTAH	46	NEW MEXICO	3.6
VERMONT	5.2	NEW HAMPSHIRE	41	CONNECTICUT	3.3

BOTTOM 5

MISSISSIPPI	1.7	KENTUCKY	23	LOUISIANA	0.1
HAWAII	1.5	LOUISIANA	21	NORTH DAKOTA	0.1
LOUISIANA	1.4	WEST VIRGINIA	20	SOUTH DAKOTA	0.1
MONTANA	1.2	ARKANSAS	19	MONTANA	0.1
WYOMING	1.0	MISSISSIPPI	17	HAWAII	0

DATA: PROGRESSIVE POLICY INSTITUTE

SETTING THE STAGE. In the poorest neighborhoods, the National Urban League reports that just 16% of schools have access to the Internet. "Policies we're setting now will shape the [economic] opportunity for the next 10 or 20 years," says B. Keith Fulton, the Urban League's Director of Technology Programs & Policy. "If folks don't get plugged in now, they will probably be marginalized into a low-wage economy."

It's up to government and the private sector to bridge the opportunity gap, so have-nots can participate in the New Economy. Studies such as these should prompt other governors to follow Virginia's James Gilmore, who created the nation's first Secretary of Technology. If states don't take action now, America could soon have a Digital Dustbowl, with families loading their PCs onto their trucks and heading to California or Colorado or Connecticut in search of a better future.

Dunham, a technophile, covers the White House.

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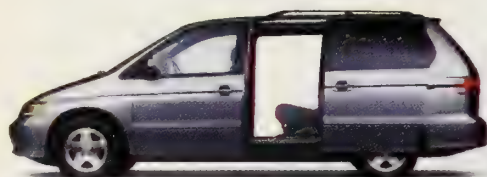
the Honda is.



...ll those other really big minivans and comes fully furnished with Honda ingenuity. Nice and comfy, huh?

...he all-new Odyssey. It's one big happy minivan.  **HONDA**

*You'll never have to
prostrate yourself for
ill-served passengers,
including the often-
neglected one back in
the rear center seat.
(Let's face it, middle
children have plenty
of issues already.)*



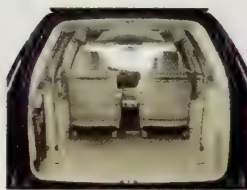
201"

*How big is Odyssey? S-o-o-o big. (And with dual
power sliding doors, it's big on convenience, too.)*

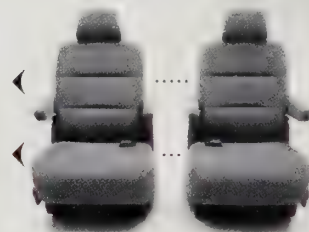
for safety, engineered to minimize
noise and has more room than you
know what to do with. And this is
one place where the furnishings

Come on, take a
look around. You'll
find Odyssey has
all the comforts of
home. Well, that is,
if your home has
been reinforced

*Unlike all those heavy
ones that you have to lug
around, our unique third-
row Magic Seat™ folds
flat in, well...seconds flat.*

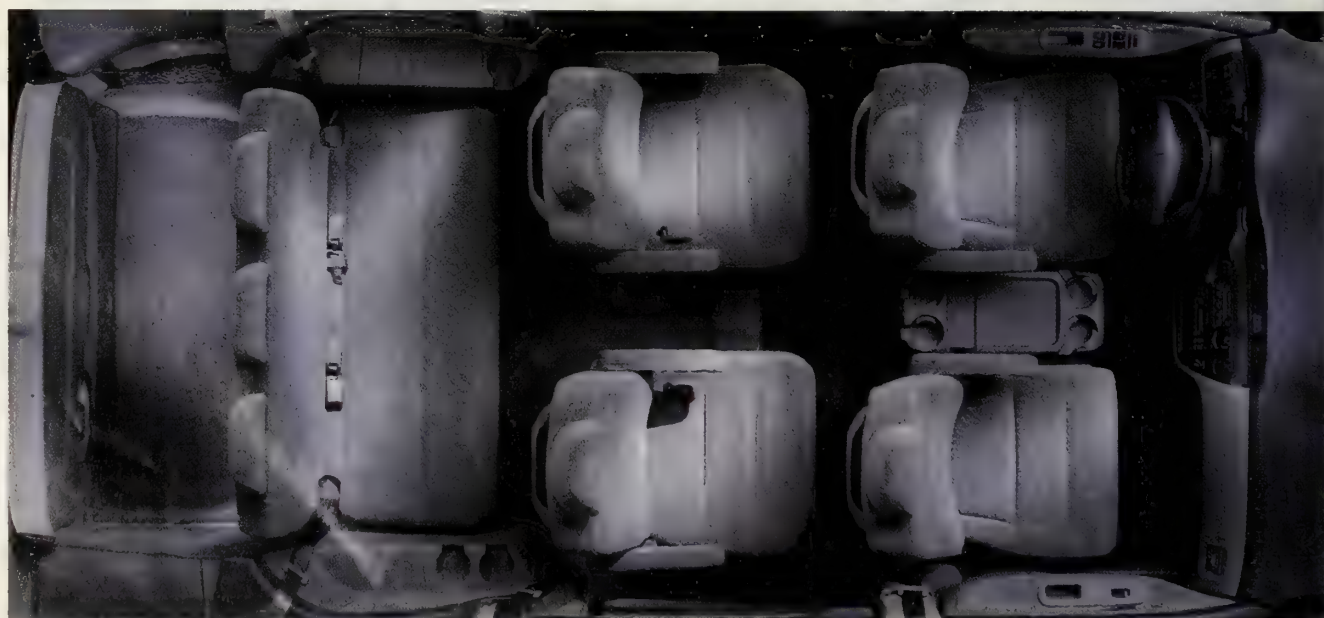


were designed to be moved around.
Convertible second-row seats.
fold-down third-row Magic Seat.
And a retractable center tray table
in front. We could go on and on
about every nook and cranny. But
instead, here's an open invitation
for you and your family to come
see for yourselves. The way to
see it, our minivan is your minivan.



*Sometimes the best way to get along together
is to sit separately. Which is why the second-
row bench seat can easily be made into
individual bucket seats. Keep the peace, be*

The all-new Odyssey. It's one big happy minivan.™



Look, we're not here to say you're squished. Odyssey's interior gives everyone more than their share of headroom, legroom and storage.

EDITED BY MARK FRANKEL

DELIVERY FROM S: AN IPO

K. ANOTHER INTERNET—or is it? Employee-owned United Parcel Service is exactly a pure Internet company, but it is getting a big boost out of having to deliver those goodies folks buy online. On July 21, the Atlanta-based delivery giant announced plans to offer 10% of its stock to the public some time this fall. The 92-year-old company says it needs tradeable stock to cut deals to compete globally and enter E-commerce. "Our business is becoming more complex with more competitors," Chief Executive James Kelly said. "We believe this plan positions UPS to continue its leadership." Analysts expect the

offering to bring in as much as \$5 billion, making it one of the biggest initial public offerings ever. But folks who buy in should forget about having any voice in running UPS: The IPO will consist of new Class B shares that will carry one vote apiece; existing shares carry 10 votes. And current shareholders still have to approve the plan.

CINCINNATI BELL'S QUANTUM LEAP

CINCINNATI BELL IS THE LATEST phone company to stake its future on broadband communications. The company announced on July 21 plans to buy IXC Communications for \$3.2 billion in stock and debt. IXC will jump-start the phone company's effort to construct a national long-distance Internet and broadband network. The Austin (Tex.)-based company is building an 18,000-mile fiber network that would allow Cincinnati Bell to expand from its Midwestern base and compete against the likes of AT&T and MCI WorldCom.

J&J: IF YOU CAN'T MAKE 'EM, BUY 'EM

JOHNSON & JOHNSON HASN'T had much luck developing new drugs on its own lately. But its results are improving at the negotiating table. The pharmaceutical giant agreed July 21 to pay \$4.9 billion in stock for biotech company Centocor. Merger talks between the two stalled earlier this year. Based in Malvern, Pa., Centocor boasts a strong roster that will help fill out J&J's product pipeline, including Remicade, a drug for Crohn's disease that is under review by the FDA for use in rheumatoid arthritis. "It's a nice fit," Salomon Smith Barney analyst Anne Malone says of the deal.

HEADLINER: JAMES SIMS

GOODBYE, MR. SIMS

James Sims, president and CEO of high-tech consultants Cambridge Technology Partners, finally found a client he couldn't help himself. Sims, 52, resigned abruptly on July 19, a tacit acknowledgment that he hasn't figured out how to slow the Cambridge (Mass.) company's slide. Sims says he got mired in issues he had little taste for. "I wanted to be an optimist, to change an industry, and I was constantly dragged back into operations."

Sims brought a guerrilla attitude to software consulting. CATP consultants

once posed as clients of a hotel chain, booking and canceling reservations en masse, to convince its executives they needed a customer-management system. But recently, CATP has been plagued by slow growth, a falling stock, and shareholder lawsuits.

While Sims and others say his decision was voluntary, his departure looked hasty: His replacement, longtime director Jack Messman, formerly chairman and CEO of Union Pacific Resources Group, had only recently settled into a new home in Texas.

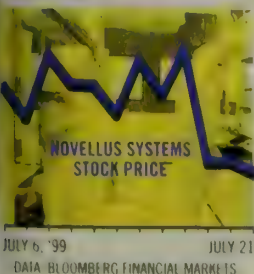
By Paul C. Judge



CLOSING BELL

PICKY, PICKY

any companies that meet it don't top earnings estimates find their shares under pressure. But Novellus Systems, a maker of chip-fabricating gear, was slammed when it reported earnings on July 19. Its net of \$12.4 million, up 32%, was in line with estimates. Its shares fell 2.3%, to 65%. Why? Novellus said sales growth would go from 10% this quarter to 3% next, before picking up. "People get freaked by the littlest thing," says Merrill Lynch's Mark FitzGerald.



ATTENTION, KMART GROCERY SHOPPERS

KMART HAS BEEN HUNGRY TO align itself with a major supermarket chain to keep up with Wal-Mart Stores. The Troy (Mich.)-based discounter has now signed deals with two grocery distributors, Supervalu and Fleming Companies, to stock its stores with \$3.9 billion worth of groceries each year. Kmart said the deal will give it more flexibility to finish its turnaround and left open the door to a link-up with a supermarket chain at a later date.

ALL RIGHT, AT&T, OPEN UP

THE FCC IS JUMPING INTO THE broadband-access fray. On July 20, Chairman William Kennard said the agency would support an appeal of a

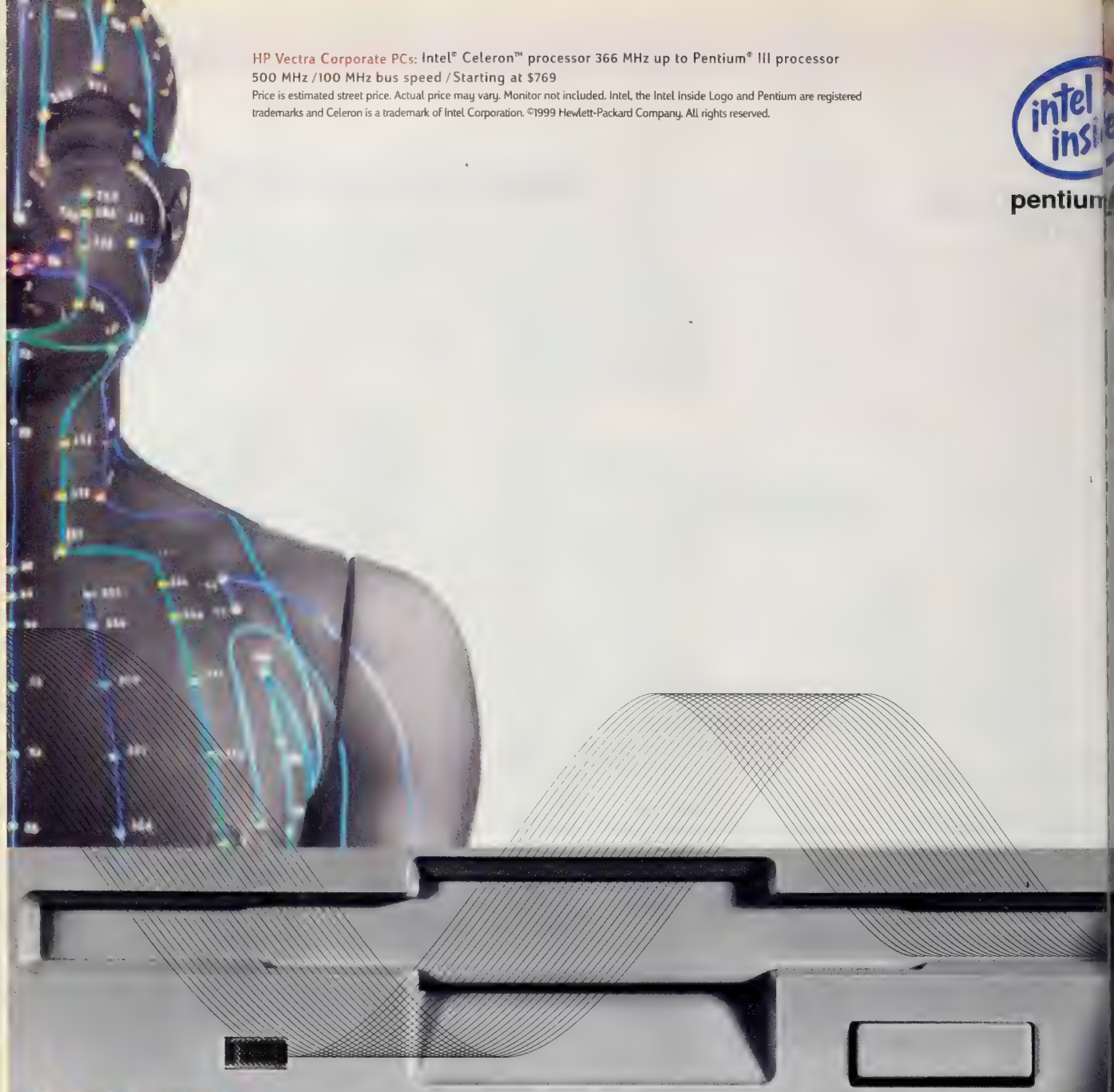
federal court decision that allowed Portland, Ore., to require AT&T to open its cable lines to all Internet service providers on equal terms. Since then, cities and counties nationwide have been eyeing the issue. The FCC wants a national policy and will file a brief in the case. Kennard has previously said that local regulation will slow the rollout of broadband. The National Association of Counties voted on July 20 that local authorities should have jurisdiction.

ET CETERA...

- Royal Caribbean Cruises pled guilty to dumping oil and will pay an \$18 million fine.
- The White House imposed \$116 million in tariffs on certain European gourmet foods.
- Microsoft sold part of its Sidewalk service to Ticketmaster Online City Search.
- Online music vendor MP3.com's share doubled on its first trading day, to \$61.

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the meridians of your business. Products like this desktop PC help keep
your company healthy.

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EDITED BY LEE WALCZAK

THEY'RE DEMOCRATS. THEY'RE TALKING TAX CUTS. WHAT GIVES?

the lexicon of the Clinton Administration, not all tax cuts are created equal. There are nice cuts—the President's limited package of targeted breaks for retirement savings, education, and health care. And there are naughty ones—Republicans' \$800 billion pastiche of tax reductions, many of which favor the wealthy. The latter, the President warns, amount to "risky tax schemes" that imperil seniors' Medicare and threaten the economy.

But even as the House Republican leadership on July 21 struggled to corral the votes to pass its own tax plan, momentum for a scaled-down tax cut, favored by many Democrats

and moderate Republicans, is building. Worried that Republicans may score in 2000 by passing tax cuts for debt-strapped Americans, Democrats are rolling out proposals that are more generous than Clinton's plan of \$250 billion in reductions over 10 years. True, polls show no new groundswell for tax cuts. But the combination of election jitters and a projected \$1 trillion surplus has Democrats rushing to get out front. In the current environment, "Cutting taxes is hardly what I would call an outrageous, irresponsible move," says Senator Bob Kerrey (D-Neb.).

Kerrey and Senator John B. Breaux (D-Colo.) are lining up support for a \$500 billion package likely to include broad-based tax relief as well as such GOP ideas as relief for low-income filers, estate-tax reductions, and bigger savings incentives. With GOP moderates fretting that a megacut is fiscally irresponsible, Breaux is eyeing a compromise. So far, at least two GOP Senators—Rhode Island's John H. Chafee and Vermont's Jim Jeffords—have expressed interest. But one House aide calls the Breaux proposal a budget-buster. Other Senate Finance Committee Dems, led by New York's Daniel P. Moynihan, are pushing a \$290 billion package. The bill features scaled-back versions of Breaux's targeted cuts, and replaces a rate cut with a big increase in the standard de-

duction. Raising the standard deduction—now \$7,200 for joint filers—by \$4,350 would most help lower-income Americans.

Even House Democrats, traditionally hostile to tax cuts, are jumping aboard. Their \$250 billion plan, crafted by House Minority Leader Richard A. Gephardt (D-Mo.) and senior Ways & Means Democrat Charles B. Rangel of New York, keeps Clinton's price tag but downplays his new retirement savings accounts. Instead, they stress targeted breaks—for two-earner married couples, parents with kids in college, and buyers of health insurance. Conservative Dems are delighted. "To Mr. Gephardt's credit, he has been very receptive," says Representative Dennis Moore (D-Kan.), a leader of the party's tax-cut forces.



KERREY: *Not a reckless notion*

GOOD POLITICS. What accounts for the change of heart? Money, for one thing. Says House Ways & Means Committee Democrat Richard E. Neal of Massachusetts: "What's changed is the sheer magnitude of the surpluses. That really allows us to discuss targeted tax cuts."

It's not such dumb politics, either. With GOP front-runner George W. Bush expected to call for slashing marginal rates, Democrats could use a preemptive strike now. "If Republicans want to run on taxes in 2000,"

says Democratic consultant Dane Strother, "let's take the issue off the table."

Does that mean your goodie check from Uncle Sam is in the mail? Not exactly. The two parties would have a tough time agreeing on specifics, and the GOP is deeply torn over the size of a cut. Besides, the President still vows to veto any tax bill unless Congress first deals with Social Security and Medicare. All that said, the Democrats' new willingness to get into the tax game has brightened prospects for a relief package next fall—and could help remake the party's image. Is America ready for the "tax-cut and spend" Democrats?

By Howard Gleckman, with Amy Borrus

CAPITAL WRAPUP

KINDER, GENTLER TAX IDEA

George W. Bush is opening a new front in the compassion wars. The Texas Governor and Vice-President Al Gore have competing proposals to carve out a wider role for churches and other "faith-based organizations" in delivering social services to the needy. On July 22, Bush was expected to offer two new ideas: a change in tax laws that would permit filers who don't itemize deductions to write off charitable donations and grants for religious ministries that aid children

of imprisoned parents. The GOP-controlled Senate Finance Committee backs similar reductions.

HILLARY'S WOMEN PROBLEM

► Hillary Rodham Clinton better not count on sisterhood to clinch her New York Senate race. In a June 26-28 survey of 705 likely New York voters by Zogby International, Clinton had a narrow 47% to 44% lead among women over Republican Rudolph W. Giuliani. A July 11-12 Marist Institute poll of 515 registered voters showed women split

42% to 42% between Clinton and the New York City mayor. Both polls showed Hillary could have a big problem with male voters: They overwhelmingly favored Giuliani.

AL GORE, SPACE CADET

► It was no accident that Al Gore was the one handing out science awards to the Apollo 11 astronauts on July 20. Democratic strategists say the Veep is eyeing a campaign-oriented challenge to the nation to embark upon a major space project, perhaps a manned mission to Mars by 2010.

CHINA'S WEB MASTERS



A new class of entrepreneur is reshaping both the economy and society

Perched on the edge of his seat and fiddling impatiently with his cellular phone, William Ding launches into a pitch that he has honed for potential investors. In rapid-fire Mandarin, the gangly 28-year-old explains how his Beijing-based Netease Systems Ltd. has emerged as one of China's leading Internet portals, with 2.9 million page views per day. It already offers E-mail, discussion groups, personal Web pages, and links to 60 mainland publications. In early July, Netease leaped into actual electronic commerce, selling 110

PCs for \$150,000 in one week in China's first online auction. Afterward, Ding says, "people were still calling, saying they wanted more."

Anyone who assumes the Internet is still a novelty in China has been asleep at the mouse. The communist giant's state-owned factories and political system may seem frozen in another era. But when it comes to cyberindustry, China is moving at Net speed. Driven by soaring computer sales, rapid expansion of China's telecom network, and the encouragement of reform

ers, Internet use is growing explosively. Two years ago, only 640,000 Chinese were connected. Now, more than 4 million are. By 2001, estimates International Data Corp., the online population should hit 27 million—perhaps bigger than Japan's. And while only \$42 million in E-commerce transactions are expected this year, they could near \$4 billion by 2003.

The impact will be revolutionary, both for China's economy and society. A new breed of entrepreneur is emerging because the government is allowing the private sector wide latitude to develop E-business—remarkable for an industry Beijing regards as strategic. The rapid spread of E-commerce could transform China's big retail and banking sectors. It will also boost efficiency of Chinese industry by allowing online factories to streamline archaic supply chains. The impact is crucial because traditional enterprises need information in order to compete," says Information Industry Ministry official Zhao Yufan. And, of course, there are the political implications, as ordinary Chinese gain access to foreign information and news. The global implications are enormous.

As Web-based commerce spreads, leaders around the world could link directly with suppliers and retailers across China. English will remain the lingua franca of global commerce. But as the Web reaches the mass market in China and elsewhere in Asia, Chinese could become the medium's most used language within five years, predicts Deutsche Consulting global telecom expert David Roddy.

LISTING. The Internet's big players are already gunning for dominance of China's portals, the gateways to the Web. Yahoo! Inc.'s English site has grabbed an early lead in China, accounting for 40% of all visits, says Sydney-based Internet research group Zinnov. That's because most Chinese surfers prefer U.S. sites over the

low-quality local fare. But the scene is changing fast as more Chinese go online and crave sites reflecting local tastes. Despite the hassles, packs of local upstarts are coming up quickly with new portals and even securing investment from foreign players (table).

Overseas investors are hungering for China plays. On July 13, China.com Corp.—a Hong Kong-based portal with a small following on the mainland—raised \$84 million as the first Chinese-language Internet company to float shares on the NASDAQ. The stock tripled, to \$67, on the first day of trading, giving China.com a market value of \$1.4 billion, before settling to around \$45.

The Heavyweights of Chinese Cyberspace

PORTAL

SINA

sina.com

SOHU

sohu.com

CHINA.COM

china.com

NETEASE

netease.com

ZHAODAOLA

zhaodaola.com

YAHOO!

gbchinese.
yahoo.com

DESCRIPTION

The most popular Chinese-language portal. Backed by Goldman Sachs, it targets global Chinese from bases in Silicon Valley, Taiwan, and Hong Kong.



Founded by MIT graduate Charles Zhang with backing from Intel and Dow Jones. An early leader but has stumbled this year.

A July IPO in the U.S. raised \$84 million. Its mainland following is small, but it has portals in Hong Kong and Taiwan. Backed by AOL and Xinhua.



A major portal owned and run by a private Chinese entrepreneur. It is growing fast and is tied to Cable & Wireless. Pioneering online auctions.

A latecomer, this Beijing-based portal is backed by televangelist Pat Robertson and a Malaysian conglomerate.



The U.S. giant's English-language site remains China's most popular portal. It launched a Chinese site late last year.

Reading these sites requires software for Chinese characters, which can be purchased and downloaded from www.njstar.com, www.richwin.com, or www.unionway.com.

DATA: BUSINESS WEEK

Market leader Sina.com, which targets Chinese Net surfers worldwide from its base in Sunnyvale, Calif., and offices in Beijing and Taipei, wants to go public within 12 months. Beijing-based Zhaodaola Internet, backed by televangelist Pat Robertson, is winning fans with its original content. "Everyone is hoping and betting that China will be the world's largest Internet population," says Zhaodaola CEO Bill Waddell.

For investors, a bigger payoff could come from business-to-business E-commerce. Alibaba.com, a Chinese portal

that connects manufacturers to foreign customers, has signed up 25,000 companies since its April launch. It already gets around 125,000 page views per day. Founded by Jack Ma, 35, a former college English teacher, Alibaba is relying on advertising and E-commerce transactions for revenue. Other entrepreneurs are preparing to sell books, clothes, and food to Chinese consumers.

PORN RAID. To encourage development of Chinese content, Beijing makes it surprisingly easy for foreign companies. While they cannot own equity in mainland telecom operators, they can own majority control of Net companies. And although Beijing guards its monopoly on traditional media, it lets entrepreneurs publish on the Web. Leaders figure a little loss of media control is worth it if E-commerce provides a new growth engine.

All the same, Beijing raises many obstacles to a truly free-wheeling Net culture. The government limits what Chinese Net users can see by telling them to block portals run by dissident and human-rights groups. Determined surfers can go through offshore services. But because Beijing prohibits imported encryption technology, state snoops can easily eavesdrop on traffic.

So China's entrepreneurs make their compromises with the government to stay in the game. China.com says in its prospectus that it "stringently" edits content and therefore "may not be as interesting as other Web sites" that

skirt PRC regulations. Its mainland site is dull as a result, but that isn't slowing founder Peter Yip. A Hong Kong financier, he built his China business by forging a partnership with official Beijing news agency Xinhua, which helped attract investors like America Online Inc. Yip plans to plow the proceeds from the stock offering into sales, marketing, and new online shopping sites.

Other portals have similar ways of dealing with Big Brother. Sina is trying to move away from hard news and develop sports content. "That will take a

lot of heat off our back," says Sina Chairman Daniel Chiang. Some content providers have experienced first-hand the limits of Beijing's patience. In January, officials of the public security bureau raided Sohu, another popular portal, because users could view illegal pornographic sites.

Still, some Internet upstarts push the envelope of what's acceptable. Netbig.com, a two-month-old portal in Shenzhen, wants to be the top site for China's newly affluent youth. So it has organized a loose network of reporters at major campuses and publishes its own ranking of universities—something the timid state media would not dare to do. Except for political information, "the Internet in China is relatively free," says Netbig co-founder Ming Liu, 28. A Duke University PhD in economics who once worked for the Federal Reserve in Washington, Liu also offers test-preparation services, fashion advice, and dating tips on Netbig.

GREAT LEAP. Making money isn't easy. Web advertising was a minuscule \$2 million in 1998, and sites must rely on retail sales for revenue. But credit cards are scarce in China. So in its July computer auction, Ding's Netease let customers pay cash on delivery for their PCs. The system worked. Industry executives hope consumers soon will buy goods with debit cards and online bank accounts.

The Net's success could breed its own problems. As it grows more lucrative, bureaucrats may not be able to keep their hands off. Beijing is usually happy to accept foreigners' investment dollars at first. Then it often changes the rules to the advantage of state-run rivals once a sector gets hot. The same could happen with the Internet.

China's backward legal system poses other big risks. While Beijing has so far given winking approval to content providers, the government has yet to spell out exactly what is legal and what is not. So entrepreneurs are taking their chances, hoping that they will get approval should the government change its policy.

Whatever happens, Netbig's Liu thinks that soon the industry will be too established for the government to ruin. The company is still running despite two police visits after its ratings irked university officials. "Once things get started," he says, "it is more difficult to shut us down." Net entrepreneurs throughout China are betting heavily he is right.

By Bruce Einhorn in Hong Kong, with Dexter Roberts in Beijing

JAPAN

THE SECRETS POUR OUT

Revised accounting rules are forcing Japan's blue-chip companies to reveal the bad news

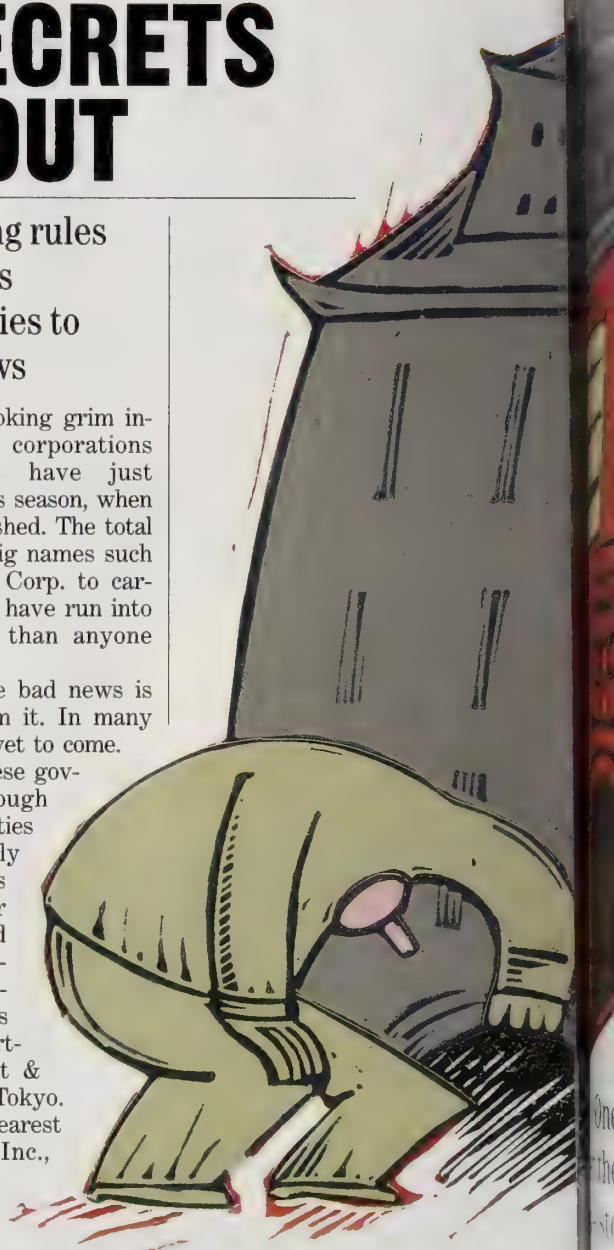
Things have been looking grim indeed for Japanese corporations lately. Companies have just wrapped up earnings season, when annual results were published. The total announced losses, from big names such as electronics giant NEC Corp. to carmaker Nissan Motor Co., have run into the billions, far bigger than anyone imagined.

But don't think all the bad news is out of the way. Far from it. In many ways, the hardest test is yet to come. That's because the Japanese government is forcing through amendments to the securities laws that will radically change the way companies report earnings, fund their pension obligations, and value their stock portfolios. "We call it Japan's accounting Big Bang," says Tsuguoki Fujinuma, a partner at Showa Ota Ernst & Young International in Tokyo. The result could be the clearest picture yet of Japan Inc., which has long cherished its secrets. Airing the dirty linen will be good in the long run, but short-term losses revealed under the new accounting rules will be painful for companies and stockpickers alike.

FULL-BLOWN. The Finance Ministry is phasing in these tougher accounting standards over the next several years (table). The cleansing starts in the current fiscal year with a mandate forcing companies to consolidate their results more realistically. Until now, parent companies only counted operations as subsidiaries if they had more than 50% ownership. In reality, big companies often controlled these small fry with far smaller stakes, moving excess employees

to the affiliates instead of firing them and often shifting unwanted losses from the parents' books to affiliates. Investors could never figure out how profitable the company's entire operations were. Now, if the parent exercises de facto control by financing the affiliate's debt or picking its board, the parent must treat the affiliate as a full-blown subsidiary.

The results of the new rules can be disturbing. Japan's No. 5 auto maker Mazda Motor Corp., recently confessed to financial analysts that the accounting change will make it harder to



JAPAN INC.: LIFTING THE VEIL

FY*	COMPANIES MUST...	EXPECTED PROBLEM
1999	Publish consolidated accounts, including all associates over which they have influence	Kawasaki Steel's leasing unit may add \$5 billion to parent's disclosed debts
2000	Disclose the true market value of pension liabilities and whether they have shortfalls	Nissan Motor may report \$4.8 billion in underfunded pension liabilities
2000	Value tradeable securities such as derivatives and equities at market prices, not historic cost	Sharp faces estimated \$33 million losses on portfolio investments

*Fiscal years starting Apr. 1

DATA: MINISTRY OF FINANCE, WARBURG DILLON READ, BUSINESS WEEK

Takaki Nakanishi at Merrill Lynch Japan Inc. "[So] it is rapidly changing its strategy to improve return on investment." Toyota is already planning to shed plants and equipment it no longer needs in Japan's sluggish auto market.

The pressure to shape up won't stop there. Starting next year, companies will have to reveal how healthy their pension funds really are. That's a big change. At present, not much disclosure is required. The new rules will probably confirm what analysts now suspect: that companies are sitting on \$661 billion in underfunded pension liabilities. That equals 20% of Japan's total market capitalization.

Nissan, for example, admits it could have a \$4.8 billion pension shortfall.

The final change: new rules on valuing the shares companies often hold in each other to reinforce the cohesion of the *keiretsu*. When the new regulations kick in, companies will have to report these shareholdings

at their actual market value, not their historical cost. If the shares have plunged in value, companies will have to come clean. That revelation, says Warburg Dillon Read's Timothy Marrable, will unleash a huge sell-off that will totally change the stock portfolios of Japan Inc. Big companies are already tackling the issue. "We are reexamining the necessity of our cross-shareholdings," admits Shintaro Nogi, a manager in investor relations at Toshiba Corp.

The impact of these changes will separate the winners from the losers. Twenty-four Japanese blue chips, in-

cluding Sony Corp. and Honda Motor Co., already follow U.S. accounting standards. They will suffer little under the new regulations. But an estimated one-third of listed companies, which have never issued even partially consolidated accounts, could have some unpleasant surprises to reveal. "The result will be further polarization within the stock market," says Kathy Matsui, strategist at Goldman Sachs (Japan) Ltd.

Little wonder that corporate behavior is changing. Trading companies like Nisho Iwai Corp. plan to slash their networks of subsidiaries by a fifth, now that many such affiliates will be in the red. By dropping affiliates, companies will no longer have places to send their hordes of passed-over executives. Says Ryoji Itoh, director of Bain & Co. Japan: "That era has come to an end."

LASH OUT. Even Japan's previously compliant accountants are starting to bite back as the new rules kick in. Some are being sued for the first time for signing off on the audits of bankrupt companies. So they are lashing out and turning away high-risk clients. "Until now, accountants operated within the confines of Japan Inc. Now, we're trying to stand on our own," says Hiroshi Nakachi, chairman of the Japanese Institute of Certified Public Accountants.

Some companies want government measures to ease the pain, such as permitting companies to use cross-shareholdings in trusts to make up for their pension deficits. Yet there is no turning back. "Not everybody is happy about the changes," admits Hiroshi Kishimoto, a deputy director in the Financial System Planning Bureau of Japan's Ministry of Finance. "But you cannot change yourself just by closing your eyes." Good point. Corporate Japan needs to take a long, hard look at itself—even if what it sees isn't pretty.

By Emily Thornton in Tokyo

One question: When investors get the real picture, how badly will the stock market suffer?

its comeback. Mazda must now consolidate 88 more dealers and parts suppliers onto its books as subsidiaries, many of them mired in red ink. If these struggling suppliers had been part of Mazda's accounts for the last fiscal year, the company's reported profit of 10 million would have shriveled to 1 million. Net debt would have jumped to \$6.8 billion from \$4.8 billion. Mazda isn't alone. Even goliath Toyota Motor Corp. may have to include as many as 50 affiliates as subsidiaries next year. "That will lower Toyota's return on assets," says automotive analyst

COMMENTARY

By Mark L. Clifford

KOREA: KIM NEEDS TO TAKE OFF THE GLOVES

On July 19, one of South Korea's most festering problems came to a head: Daewoo Group was perched on the edge of a bankruptcy that would have triggered a wave of insolvencies throughout the economy. The government stepped in and asked Korean financial institutions to give Daewoo a reprieve. Creditors rolled over \$5.9 billion in loans that were about to come due out of Daewoo's estimated \$50 billion in debt. Crisis averted—for the time being. But as Korea's powerful conglomerates, or *chaebol*, continue to play a dangerous game of chicken with their creditors, what happens next time?

As President Kim Dae Jung grapples with the *chaebol*, he's finding his honeymoon period over and his reforms just barely taking hold. After 17 months in office amid the worst economic devastation since the Korean War in 1953, Kim is struggling to keep his original objectives in sight—never mind implement them. Kim has made public declarations about curbing the *chaebol* and rooting out corruption. Yet corruption scandals have roiled the administration. One involves Kim associate Lim Chang Yeul, who helped steer the country out of economic crisis but allegedly took a payoff from a bank executive. And Korea's five largest *chaebol* have used the downturn to bulk up, not slim down. "The government is weak. The *chaebol* are very strong," says Seoul National University economics professor Chung Un Chan.

Politically, Kim is fighting to keep off the tarnish as well. Conservatives are attacking his strategy of trying to open up to North Korea. In parliament, Kim is scrambling to keep a shaky domestic political alliance together as jousting intensifies ahead of next April's elections.

Part of the problem is that Korea's bubbling economy seems to have blunted the zeal to reform. The economy is expected to grow 8% this year, compared with a 5.8% drop last year, based on strong exports and surging domestic consumption. That makes Korea the fastest-growing major economy in the world. Meanwhile, stocks are booming, with the Korean Composite Index up 71% so far this year.

Kim is smart enough not to be lulled by the recovery. Korea still has deep structural problems. Al-

assets. "Nobody can control the *chaebol*," says a Korean who heads a foreign securities firm in Seoul.

Kim's next steps will show how far he can still push reform. With Daewoo, the President could follow through on pledges to force the group to jettison businesses and force out Kim Woo Choong. So far, these have amounted only to threats. Kim has refrained from acting, fearing that a forced breakup of any *chaebol* could wreak havoc, create mass unemployment, and cause banks burdened with *chaebol* debts to fail. But

if Daewoo gets away without restructuring, it could bury reform.

As for rooting out corruption, Kim could go beyond moralizing and make practical changes: paying civil servants higher salaries but reducing their individual decision-making powers; insisting on more transparency in the civil service; and ending the routine corporate practice of handing out cash to everyone from journalists to government officials. Finally, Kim could ensure compliance through an independent corruption commission modeled on Hong

Kong's successful minimization of graft in a city that lived on dirty money as recently as the 1970s.

A devout Catholic fired by a zealous sense of what's right, Kim's leadership has been pivotal to restoring international confidence and allowing Korea to tap the international bond market for much needed cash. Having escaped a death sentence and two government-sponsored assassination attempts, Kim has been through worse trials in his four-decade political career. But he can't afford to rest. A new Korea needs a big push of the sort that only a leader of Kim's stature can provide.

Clifford is Asia Regional Editor

The President's honeymoon is over, and his reforms are barely taking hold



though Korean taxpayers have ponied up \$54 billion to recapitalize the country's financial system, there's still no sign that banks have been transformed into modern lending institutions. Companies haven't restructured, and their pledges to focus on profitability and transparency remain little more than slogans. The old ways of doing business remain firmly in place.

EMPTY VOWS. Daewoo is a good example. The giant *chaebol* promised to sell off assets to raise needed cash, and founder Kim Woo Choong pledged to step down from the helm. But so far, Kim Woo Choong has stayed on. And the company has kept expanding while selling off almost no



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AEROSPACE

HOW AIRBUS COULD RULE THE SKIES

A revamped consortium poses a serious threat to Boeing

It could be Boeing Co.'s worst nightmare. Hordes of visitors to the Paris Air Show of 2005 watch the takeoff of a new Airbus superjumbo, the world's biggest commercial jet. Amid fanfare over the plane, swelling orders, and rising profits, Airbus executives drop a bombshell: Lockheed Martin Corp. and Mitsubishi Heavy Industries Ltd. will strengthen longterm ties to Airbus, become equity partners in a European aerospace company, and collaborate on both commercial and military projects.

That vision may well come to pass in the next few years. While Boeing execs have long dismissed Airbus as a clumsy consortium propped by state subsidies, their European rival has become a strapping adversary. For sure, the Seattle-based giant on July 15 reported a 172% surge in second-quarter profits. But in the first half of 1999, Airbus' orders rose to 66% of the global market. And Airbus is on the eve of a radical restructuring that could turbocharge competitiveness. Boeing may have turned around. But the race with Airbus is growing fiercer.

For Airbus to build on its gains, it must shed its status as a marketing group to become a real corporation. That's likely to occur next year. The catalyst will be a series of defense industry deals involving Airbus partners Aérospatiale Matra, DaimlerChrysler Aerospace (DASA), and British Aerospace. The goal: Turn Airbus into a publicly traded company that's part of a giant European defense and aerospace group—with the fiscal clout, management focus, and manufacturing mass to match Boeing. Says DASA CEO Manfred Bischoff: "The earlier the better."

TOP GROUP. Indeed, the momentum for an Airbus makeover is stronger than ever. The effective privatization in June of France's state-owned Aérospatiale through a merger with Matra High Technologies has cleared away a key stumbling block. Aérospatiale had long resisted turning the group into a real corporation, but the CEO of the new Aérospatiale Matra, Philippe Camus, strongly backs it. "Airbus will be the core of a large aerospace group with activities in defense—one of two or

three major groups in Europe," he says.

Airbus partners are now racing to make acquisitions and improve their leverage before launching the final talks over an Airbus corporation. On June 11, DASA acquired CASA, Airbus' state-owned Spanish partner, through a share swap. That gives Germany the largest stake in Airbus—42.1% vs. Aérospatiale



Matra's 37.9%. Ultimately, aerospace sources say, the remade Airbus is likely to have a German-French core. Some insiders speculate British Aerospace may sell its 20% stake to one of the other partners and simply continue to produce wings for Airbus. For now, though, BAE CEO John Weston says it's unlikely someone would put enough money on the table for us to sell."

LOCKHEED? One thing is clear about Airbus' future: The company is sure to elicit American partners. Already, Lockheed Martin executives at the Paris Air Show in June said that the company would be interested in one day becoming a full Airbus partner. "We would welcome an American partner in Airbus," says DASA's Bischoff. In mid-June, Lockheed Martin announced agreements with Aérospatiale Matra to team up on development for a strategic tanker plane based on an Airbus model and for collaboration with the new Korean Aircraft Industries, a major Asian player. Executives at both Aérospatiale Matra and Lockheed Martin execs say the agreements could be the first steps toward a relationship in which Lockheed Martin might take an equity stake in a new Airbus.

For Airbus, the driving force behind its makeover is its rivalry with Boeing. Airbus must keep pace with Boeing's productivity gains, as well as finance \$12 billion in R&D for its superjumbo dubbed the A3XX. Investors will be likely to participate unless Airbus' financial accounts are transparent. That's the

FLY UNITED? Joint defense deals are vital to Airbus' new clout. And ties to a U.S. player are in the cards

structured Airbus hopes the new corporation will be created next year. "Boeing is a formidable competitor, and they will recover. We cannot afford to be streamlined when they are back in good shape," says Forgeard, now president of Airbus Industrie, the marketing organization for the consortium. He's eager to shake up everything from purchasing to manufacturing.

As a new era of commercial jet competition dawns in the 21st century, it's no longer an upstart Airbus against a colossus Boeing. As a real corporation rather than unwieldy consortium, Airbus will have an even greater chance of making a bid for market leadership. That should cause a few sleepless nights in Seattle.

By Gail Edmondson in Toulouse with Janet Rae-Dupree in San Francisco and Kerry Capell in London



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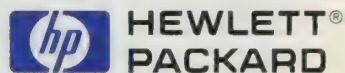
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EDITED BY PAUL MAGNUSSON

MEXICO: COULD THIS SCANDAL LINK THE PRI?

ook investigators six months of painstaking work to confirm the Mexican Congress' suspicions: A nine-year effort to shore up the country's tottering banking system been a disaster. In a 300-page report delivered on July 1, Canadian auditor Michael Mackey said lax government regulation allowed rogue bank owners to lend \$8 billion to themselves and cronies without collateral. Worse, regulators let \$71 billion on a haphazard cleanup that still leaves the system undercapitalized and unable to lend.

These and other revelations could pose a serious problem to President Ernesto Zedillo's Institutional Revolutionary Party (PRI), just as campaigning for the July 2000 presidential election begins. For the first time since the PRI assumed power 70 years ago, it is the real possibility of losing the election to one of two fast-growing opposition parties, the center-right National Action Party (PAN) or the left-wing Party of the Democratic Revolution (PRD).

The opposition, which has controlled Congress since 1997, has made the bank audit its first major challenge to the PRI-controlled executive branch. While the audit contains no evidence of blatant government wrongdoing, it lays bare the loose regulation and generous bailout packages that forced taxpayers to absorb billions in dubious bank loans. And it gives PRI opponents ammunition: Mackey revealed that regulators refused him access to records of failed Banco Unión, the alleged pipeline for \$25 million in contributions to the PRI for Zedillo's 1994 campaign. The government pledges to punish any wrongdoing. It argues that it had to bail out the banks to protect the savings of ordinary Mexicans. But in fact, just a few hundred wealthy Mexicans account for a large chunk of bank debts. These millionaires, and a dozen or so large businesses

whose past-due loans formed the bulk of the debt absorbed by the Treasury, appear to be the chief beneficiaries of the bailout. If opposition politicians get that message across to voters, they may score big in next year's elections. "The audit shows a clear pattern of complicity between authorities and some bankers and businessmen," says leading PAN congressman Santiago Creel.

EMBARRASSED. There's certainly dirt to publicize. Three Mexican financiers are awaiting trial on fraud charges. One, Carlos Cabal Peniche, is fighting extradition from Australia, claiming he faces political persecution from Mexico because his Banco Unión allegedly contributed millions to the PRI. Before fleeing, Cabal Peniche owned two banks, and he may have illegally lent himself as much as \$500 million to buy control of Fresh Del Monte Produce in 1993.

The banking crisis is an embarrassment for the PRI technocrats who have run the economy since the mid-1980s. The PRI's current leadership, including technocrat-in-chief Zedillo, argue that Mexico weathered recent international financial crises because they insisted on strict fiscal discipline at home. But party traditionalists fear they could lose next year's election if voters conclude the technocrats bailed out the fat cats while squeezing common Mexicans with spending cuts. Debate within the PRI over the bank bailout and an investigation into the fugitive banker's alleged donations to the Zedillo campaign could shatter party unity before the party's Nov. 7 primary. "We must get to the bottom of this problem so that our party is not affected," says PRI presidential hopeful Roberto Madrazo, who openly criticizes the technocrats' performance. Meanwhile, the opposition is standing by, ready to exploit any misstep by the PRI.

By Geri Smith in Mexico City



HOT REPORT: Auditor Mackey (left)

GLOBAL WRAPUP

CHINESE DEVALUATION?

Worries are growing about a Chinese devaluation. Beijing had held firm during the Asian financial meltdown—a stance cited by some as a reason to reward China with membership in the World Trade Organization. It now China seems to be wavering. The costs of its privatization program increase, its economy slows, and its trade surplus shrinks. Central Bank Governor Dai Xianglong recently hinted that the market should be letting the yuan's value. Taking note,

on July 21, Standard & Poor's lowered its rating for China's sovereign foreign currency debt to BBB from BBB+ to reflect the chance that China will be tempted to devalue in order to maintain exports.

STAYING PUT IN FRANCE

► French President Jacques Chirac is turning his back on his own conservative ranks—and dismissing calls for him to truncate his seven-year term. The issue arose in early July when former President Valéry Giscard d'Estaing urged fellow conservative Chirac

to call new elections for next year, two years ahead of schedule. Giscard complained that Chirac, who lost much of his power two years ago when Lionel Jospin's Socialists took parliament, faced another three years as a lame-duck president. Chirac is paying no heed. France's right is splintered and suffered a pummeling at the hands of the Socialists in June's European elections. More important, the Socialists are proving effective at economic reform. Chirac's apparent strategy: To let Jospin run France until 2002 and to profit from any Socialist stumbles.

PHARMACEUTICALS

FRESH STRAINS OF UNZAPPABLE GERMS

But molecular clues could lead to more effective drugs

Ten years ago, Dr. Elaine Tuomanen began a molecular assault on one of the more mysterious secrets of bacteria. Her mission was to find out how some microbes escape the killer effects of antibiotics—and then to find a way to zap those tenacious bugs.

In the course of trying to answer these questions, Tuomanen found, alarmingly, that this ability to escape the effects of antibiotics has already appeared in certain strains of the bacterium *Streptococcus pneumoniae*, which is responsible for ear infections, pneumonia, meningitis, and other infections—and kills 40,000 Americans per year. The bacteria are “tolerant” of antibiotics, meaning they cannot grow in the presence of the drugs, but neither are they killed. Once treatment is stopped, they can sometimes flourish again. Tuomanen found that these strains have begun to spread among the general public. That could explain why some children who appear to be recovering from meningitis suffer relapses. “It is a very bad piece of news to have something circulating out in the community that’s not treatable,” says Tuomanen, who heads the department of infectious diseases at St. Jude Children’s Research Hospital in Memphis.

SIGNALING SYSTEM. Tuomanen also turned up encouraging news, however. “We have the beginnings of an answer” for a new way to tackle antibiotic-tolerant microbes, she says. In a recent report in *Nature*, she and her colleagues said they had uncovered an intriguing cellular mechanism that responds to antibiotics—a discovery that could lead to a new class of more effective drugs.

“This is the first time this kind of signaling system has been found to play a role in a common organism’s response to antibiotics,” says Dr. Hugh Rosen, executive director of basic infectious disease research at Merck & Co., who was not involved in the research.

The findings raise new concerns about the spread of organisms that cannot be killed by existing antibiotics.

WHEN ANTIBIOTICS WORK

1 Chemical signals triggered by antibiotics are detected by a sensor on the bacterium’s surface.

2 The sensor then sends its own signal to regulator molecules inside the microbe’s cells...

3 ...which in turn switch on a self-destruct program in the microbe’s genes, thus killing it.

WHEN THEY DON’T WORK

In some strains of bacteria, the sensor mutates and can no longer send out a signal. As a result, the self-destruct program is not activated, and the bacterium survives the antibiotic.

Doctors and public health officials are already struggling with the emergence of strains of staph, *Streptococcus*, and other germs that shrug off attacking drugs as easily as umbrellas shed rain. In addition, researchers know that some bugs display tolerance, a lesser form of resistance. That is what Tuomanen is finding in the *Streptococcus* bacteria.

Until recently, however, bacteria re-

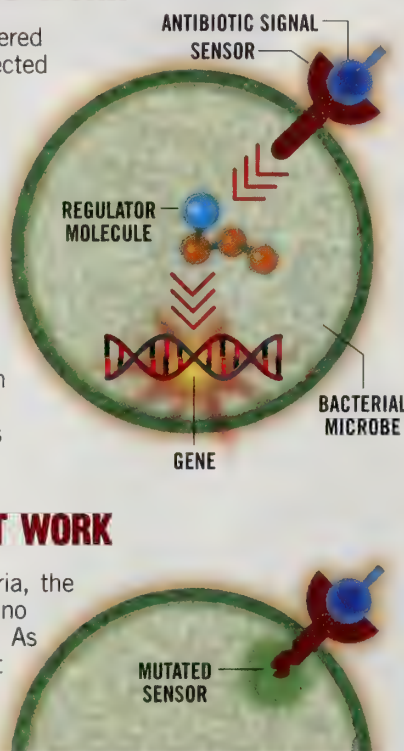
sistant or tolerant to antibiotics have been a problem mainly in hospitals, explains microbiologist Michael S. Gilman of the University of Oklahoma Health Sciences Center. In hospitals, doctors have a fighting chance of controlling microbes’ spread. But Tuomanen’s discovery that the microbes are beginning to appear in the general public suggests that efforts to control the spread of resistant or tolerant bacteria could become more difficult.

MYSTERY SWITCH. Tuomanen’s discovery required years of painstaking research. Scientists had known since 1970 that penicillin and other antibiotics don’t usually kill bacteria directly. Instead, the drugs somehow turn on a bacterial self-destruct program that causes the bacteria to die. But what flips on the switch? And why do some bacteria strains seem to lack the switch entirely? That is what enables them to tolerate antibiotics.

Tuomanen chose to work with *Streptococcus* bacteria. Five years ago, she began altering the germ’s genes, hoping to develop a collection of strains in which one of the bacterium’s 2,000 genes was disabled. Within three years, she had a library full of some 10,000 strains. Next came the tedious task of growing the altered strains in the lab and searching for those that could tolerate antibiotics. The idea was to determine which genes were part of the bacterial self-destruct mechanism.

The search bore fruit. Tuomanen and her co-workers first found that 25 tolerant strains could survive when doused with antibiotics. Then they showed that one of those mutated genes was part of the elusive long-sought self-destruct switch. It was the gene for a sensor molecule that perches on a microbe’s outer

membrane. When the sensor encounters evidence of an antibiotic, it starts a biochemical process that turns on the self-destruct switch—and the germ dies. But when that sensor is disabled, Tuomanen found, antibiotics do not trigger the signal that turns on the self-destruct switch. The biochemical process is what scientists call a “signal transduction pathway,” one of many communication systems that perform vital tasks



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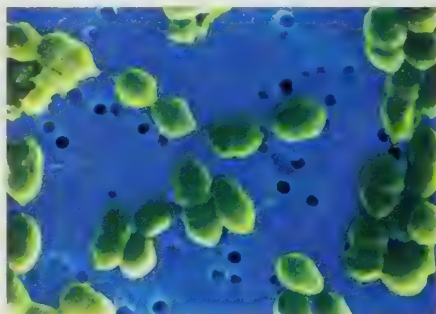
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side cells. Tuomanen's work "reminds us that the signal transduction pathway of bacteria is very important," says W. Gary Tarpley, vice-president for discovery research at Phamacia & Upjohn Inc.

Tuomanen then analyzed samples of *Streptococcus* microbes taken from sick people. She discovered that 2% of the bacteria harbored this sensor mutation. That meant they would not be destroyed by antibiotics—not even by the antibiotic vancomycin, which kills al-



An ideal drug might flip on the self-destruct mechanism directly

LETHAL STREPTOCOCCUS BACTERIA

most anything. "We were pretty shocked," Tuomanen says. Adds the University of Oklahoma's Gilmore: "What is really important is that she found that [the microbes] weren't just tolerant to penicillin, but to vancomycin as well."

Tuomanen already has preliminary evidence suggesting that kids who get meningitis from tolerant strains of *Streptococcus* tend to have more relapses. And she's now analyzing germs from sick kids to determine the extent of the problem.

Tuomanen has also stepped up the effort to reach her original goal: finding a new drug that can zap antibiotic-tolerant strains. It might be possible to find a drug that bypasses the mutated sensor and flips on the self-destruct mechanism directly. Or it might be better to jump-start the suicide genes at a later stage in the sequence of events leading to cell death, drug development experts say.

Either way, there's tantalizing hope that drugs using such approaches might make it tougher for mankind's microbial scourges to develop tolerance or resistance to drugs. As the struggle between man and microbe continues, Tuomanen's years of genetic sleuthing may eventually help tip the balance.

By John Carey in Washington and Amy Barrett in Philadelphia

The Workplace

AUTOS

LABOR COULD BACK THIS GM SPIN-OFF

A tried-and-true compromise may ease Delphi's transit



WHERE'S MY PENSION? Workers prefer GM's benefits

Ever since General Motors Corp. announced the spin-off of its \$28 billion auto-parts unit last year, management has braced for a showdown with the United Auto Workers when its labor pact expires on Sept. 14. UAW President Stephen P. Yokich has made it clear all along that he opposes the spin-off, which GM undertook in part because nonunion rivals pay half the \$20 an hour Delphi's 46,000 parts workers earn. Even after Delphi Automotive Systems Corp. became a separate company in May, Yokich vowed to hold GM's feet to the fire in this summer's contract talks with the Big Three auto makers.

Now, it's becoming clear how all sides may be able to resolve this thorny issue. To ease Delphi workers' fears, GM and Delphi negotiators say they're amenable to Yokich's suggestion to follow the script used in GM's sale of five unprofitable parts plants in 1994. In that case, GM gave all 7,500 workers the right to transfer back to the security of a GM job, based on available openings. And American Axle & Manufacturing Inc., the new company created by the '94 sale, agreed to pay GM-level wages and benefits to those

who stayed with the new company.

Plenty of details remain to be worked out, most notably how long Delphi will commit to such uncompetitive wages. The new labor pact it signs in September. Indeed, Delphi has made no secret of its ultimate objective: to break away from the Big Three labor pacts and bring pay and benefits more in line with nonunion rivals. But negotiators on both sides say earlier fears of a meltdown have eased. Better yet, an American Axle-style solution also could serve as a blueprint for Ford Motor Co., which is contemplating the spin-off of its auto-parts unit, Visteon Automotive Systems.

What's more, since GM first announced the spin-off, investors have anticipated that Delphi would have to match GM's high wage levels, at least for now, in order to keep peace with the UAW. So Wall Street doesn't expect the current round of negotiations to have much impact on Delphi's near-term financial outlook.

Of course, the financial impact of a Delphi-UAW contract is smaller than that used to be. Although the UAW remains Delphi's largest union, it represents only about 23% of Delphi's total work-



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The Workplace

force, down from 44% in 1992. That's because Delphi is opening more factories overseas, where labor is cheaper, as it lines up new non-GM customers. That shift has already led to a significant drop in Delphi's average labor costs. In 1992, Delphi paid workers an average \$27 an hour; now the rate is \$20. In the U.S., meanwhile, Delphi is already working with the union to improve productivity without cutting wages, and both sides expect that to continue.

Why has harmony broken out? Experts say that in exchange for the union's acquiescence on Delphi, GM has backed off its plans to adopt so-called modular manufacturing techniques, which give more work to lower-wage, often nonunion, suppliers. "The UAW's strategy is to give GM the Delphi spin-off and delay" modular, says University of Michigan labor researcher Sean McAlinden.

Already, GM and Delphi have taken steps to allay Delphi workers' trepidations. As early as December, GM agreed that any Delphi worker who retires before Oct. 1, 1999, gets a pension from GM, not Delphi. Then, afraid of a stampede, Delphi went further and pledged that no matter how the labor talks turn out on Sept. 14, it will match GM's pension for the life of the next contract.

BLUEPRINT. Beyond pensions, the American Axle experience provides a blueprint for managing the future at Delphi or Visteon, which employs nearly 24,000 UAW members. American Axle honored the existing pact and then gave the union three more years of GM-level pay and benefits. Still, nearly half of the 7,500 affected workers opted to return to GM rather than take their chances with a newly formed company. "These people just didn't think there was life after General Motors," says Kevin Donovan, a UAW officer. American Axle declined comment.

Many Delphi workers may feel the same way. Of course, with \$28 billion in revenues and 168 plants worldwide, Delphi is no unknown entity like American Axle was five years ago. As one of the world's 30 largest companies, it's not likely to go out of business. Still, even with

the new pension guarantees, both GM and company officials expect 7,000 more older Delphi workers to bathe in the path to retirement before the Oct. 1 pension deadline. And thousands more likely will apply for the right to return to a GM job.

This is where the American Axle example may not set the precedent the UAW would like. In the mid-1990s, GM was in a hiring mode, adding some 100,000 workers, enough to accom-

modate most American Axle employees who wanted to go back to the former parent company. **NEED TO CUT.** Today, GM has all but stopped hiring. GM's workforce is the oldest of the Big Three, with an average age of 48, and its attrition rate is running at nearly 7% a year. GM is shrinking its workforce to fit a smaller market, so the company is replacing most of its 7,000 workers who leave each year in 1998, for example, with just 500 hourly employees. GM absorbed only 1,300 new hires, from all its spin-offs. Result: a right to first crack at a GM job opening may not amount to much for all the antsy

WHAT'S AT STAKE IN DETROIT'S SPIN-OFFS

The UAW is sparring with auto makers over the recent spin-off of GM's former parts unit and a possible similar move by Ford. The key issues:

JOBS The United Auto Workers wants GM to pledge to hire any spun-off workers who wish to go back to the parent company. But GM is trying to shed jobs, not add them.

WAGES The union wants parts workers to keep their \$20-an-hour wages, but Delphi hopes to bring them in line with nonunion rivals paying \$10 to \$15.

PENSIONS Delphi already has agreed to match GM's pensions for the life of the next contract.

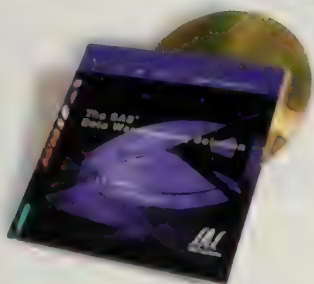
Delphi workers who might want to return.

Even so, the UAW hopes that American Axle will stand as a model for both Delphi and Ford's Visteon, should it be spun off. Since 1994, American Axle has managed to maintain GM-level compensation by improving its manufacturing process and becoming more productive—the \$2.4-billion company moved into the black last year after it was founded.

In the long run, the UAW must close the large pay discrepancy between union and nonunion parts workers. The union expects American Axle to demand wage cuts for the first time when its labor pact expires again next February. The UAW will argue that continued productivity gains can make the company more competitive with nonunion peers, says the UAW's Donovan. But what happens then may foreshadow what Delphi workers likely will encounter when their contract talks roll around three or four years from now.

By Joann Muller in Detroit

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business **data**
to make
sense
of it all?



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STRATEGIES

FILM vs. DIGITAL: CAN KODAK BUILD A BRIDGE?

The giant is betting there's money to be made in both worlds



George M.C. Fisher spent his entire five-and-a-half years as chairman of Eastman Kodak Co. struggling to move the world-famous photography giant into the Digital Age. The once-idolized ex-Motorola Inc. chief recently announced that he will step down as CEO on Jan. 1, declaring that Kodak's digital strategy is finally poised to reignite the company's sluggish sales. Fisher cites an array of digital initiatives that will help boost overall sales by 8% to 12% a year in five years. "We've finally turned the corner," Fisher says, "even though we don't have the results to prove it yet."

Those results aren't a lock. For one thing, success in the digital world requires constant innovation and change—things Kodak is not known for. Moreover, the projects Kodak has unveiled so far are unlikely to provide the short-term sales jolt the company badly needs. And the job won't get any easier as digital technology comes down in price, opening the door to new competitors. "Kodak's digital-imaging initiatives appear to be aimed at

brand building, not revenue generation," says Donald Strickland, a former Kodak executive who is now CEO of digital-imaging software maker PictureWorks Technology Inc.

Indeed, building its brand may be Kodak's best move. It's critical that the company extend its name to digital since the technology represents a long-term threat to its core franchise in 35mm film. Although experts disagree over how long it will take for digital imaging to start shrinking the worldwide film

market, that day is surely coming. Kodak sees just 5% growth in its film market over the next decade and even may be optimistic. Market research Lyra Research estimates that worldwide film sales will grow only 1% annually through 2003 and slowly shrink thereafter. Rapid growth in markets as China will be tempered by a tilt toward digital cameras, especially in the U.S. and other developed markets. That's where Fisher's heir, Daniel

The Hand Kodak Is Playing

Kodak's new leader, Daniel Fisher, is unrolling a hand of digital products

1 PICTURE MAKER KIOSKS

These do-it-yourself printers are Kodak's biggest digital success. Available in 19,000 stores worldwide

Carp, comes in. A 29-year Kodak vet, Carp made his name as a brand builder rather than a techie. His challenge: build the consumer trust in digital that Kodak already has in film.

That way, as the technology spreads, Kodak will be set to profit. "We're digitizing creating a film and a print finishing aftermarket that should be an explosion of pictures and use" of digital and 35mm technology, Carp says.

At its core, Kodak's digital strategy is to create a profitable bridge between the old and new worlds of photography. Even as it hopes to jump-start sales of digital cameras, the company wants to transfer as many of its customers' traditional snapshots as possible to digital form. It figures there's big money to be made by uploading traditional pictures onto the Internet and in expanding its share of the market for reprints, inkjet paper, photo-editing software.

Such changes can't happen soon enough. Amid the long-term shift in its market, Kodak has been struggling. A debilitating price war with Fuji Photo Co. has crimped sales in its consumer business, which accounts for over half of total revenues. Meanwhile, Kodak has been pouring

2 DIGITAL CAMERAS

Kodak is No. 2 behind Sony in U.S. market share but has yet to turn a profit on them.



IF TECHNOLOGY IS ADVANCING AT AN AMAZING SPEED, WHY ARE YOU STILL LEARNING ABOUT IT THE SAME OLD WAY?

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money into new ideas for digital imaging that have yet to pay off. At a recent \$74 a share, Kodak stock has barely budged since 1997. A \$1.2 billion cost-cutting program launched in 1997 that will trim 20% of its workforce by yearend has buoyed profits. But revenues dropped 5% in 1998

and are expected to be up just 3% this year, to \$13.8 billion, with about \$1.5 billion coming from digital. Second-quarter earnings were flat on a 2% rise in revenues.

NET IDENTITY. The company's long-suffering investors don't sound convinced that Carp has the right angle to get Kodak in focus again. "Kodak is going to be controversial until they can do something right on a consistent basis," says one money manager whose fund has 5 million shares.

The centerpiece of Kodak's digital strategy is a joint venture with America Online Inc. called You've Got Pictures, which could give the photo company a strong Internet identity. When it is rolled out this fall, consumers will be able to drop 35mm film off at the



3 YOU'VE GOT PICTURES

A service set to launch this fall lets film labs deliver pictures to a customer's AOL account. Competitors offer similar products for free.

drugstore and for about \$6 have a roll of 24 pictures digitally scanned and uploaded into their AOL accounts. From there, consumers will be able to E-mail the images to friends, order reprints or gifts, or download high-resolution copies that can be edited on a PC. They'll be able to store 50 pictures on the site for free.

Even under the best scenario, You've Got Pictures won't translate into big revenues. Analysts estimate Kodak will get 40% of upload charge. Even each of AOL's 17 million subscribers upload a roll of film by year's end, Kodak's take will amount to only about \$41 million plus merchandising storage fees. Still,

Schuler, president of AOL Interactive Services, says the long-term potential is huge: "Over time, this could be as big as E-mail."

To expose even more consumers to digital photography, Kodak since has offered a service nationwide called Picture CD. For \$10 a roll, consumers can get images from 35mm film loaded onto a compact disk. But it won't be a big revenue producer anytime soon. The CDs simplify the process of getting high-resolution images into a computer and come with a wide assortment of image-editing software. Fisher forecasts that Picture CD will generate up to \$100 million in revenue in its first year.

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ts say Kodak may get 40% of that after retailers and partner Intel get their share; that's barely \$10 a quarter. Still, Kodak plans to enter the market for Picture CD by licensing it to professional markets. Dealers, for example, might give customers Picture CDs with 3-D images of products for sale.

END EDGE. Kodak also has high hopes for the fast-growing digital-camera market, even though it is currently losing money there. Its 17% share of digital-camera sales in the U.S. badly trails Sony Corp.'s 52%. However, analysts say most future market growth will come from the higher-end photography digital cameras. Kodak leads in that segment, though Sony is preparing for assault. International Data Corp. estimates that the worldwide digital-camera market will grow 25% annually, to \$1.3 billion, in 2003. If Kodak keeps a 15% share, cameras could become a \$1.3 billion business for the company. The fourth leg of Kodak's digital strategy is already paying off. Over the last two years, the company has installed some 19,000 Picture Maker kiosks at retail stores worldwide that display pictures from both digital and tra-

ditional film. These devices accept negatives, CDs, or digital-camera memory cards and let users edit images and make prints. At about \$15,000 each, Carp says they are highly profitable and account for about \$200 million in sales. And with 95% of customers who use them coming back repeatedly, they produce steady photo paper sales.

For all their promise, however, each of Kodak's new products will be under intense competitive pressure every step

4 PICTURE CD A new joint venture with Intel lets consumers put their pictures on compact disks. Rivals offer similar services for less.

DATA BUSINESS WEEK



of the way. Upstarts such as Photolift.com Inc. are offering to store photos on the Web for free and make money selling trinkets like mugs and greeting cards. Seattle FilmWorks Inc. includes Internet uploads free with its \$10 film-processing charge, and many analysts think upload prices will fall rapidly. It's a similar story with picture CDs. Some retailers sell Fuji-made picture CDs—without the software Kodak adds—for about 30% less than Kodak.

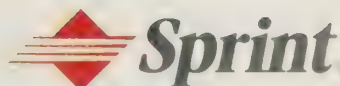
Fisher understands all too well the power of rivals to undercut his prices. And he acknowledges the uncertainty around Kodak's digital strategy and ability to nimbly create a bridge between the old and new technologies. Kodak has "to come up with at least one or two big ideas every year" to add to its digital arsenal, he says. Kodak may have a few already, but in the digital world, even the best ideas can fade fast.

By Geoffrey Smith in Rochester, N. Y.



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STOCK MARKETS

A REVOLT AT NASD?

Small firms are rejecting Chairman Zarb's expansion plans

Alan L. Davidson is spoiling for a fight. The Jericho (N. Y.) bond dealer thinks nit-picking regulators are hounding small brokerage firms like his out of business. Worse, he sees the National Association of Securities Dealers—the securities industry's biggest regulator, and operator of the NASDAQ and American Stock Exchange—racing ahead with after-hours trading and links with overseas exchanges. Moves like that, he charges, will “bankrupt” most NASD member firms. “In today’s NASD,” complains Davidson, president of Zeus Securities Inc., “the big are getting bigger—and the small are getting annihilated.”

Rantings of a regressive dissident? That’s what NASD’s leaders thought—until last December, when Davidson, president of the Independent Broker-Dealer Assn., and his allies ousted

Stock Exchange, that would make easier for Big Board traders to deal in NASDAQ-listed stocks.

NASD Chairman Frank G. Zarb won’t talk publicly about Davidson or the challenge from small firms. But he is moving rapidly not only to update NASDAQ on the Amex but to stake a claim to overseas and after-hours trading before his three-year term expires in January.

To accomplish this, he has little choice but to line up with the big brokerage houses, says Columbia University professor John C. Coffee: “If the up-



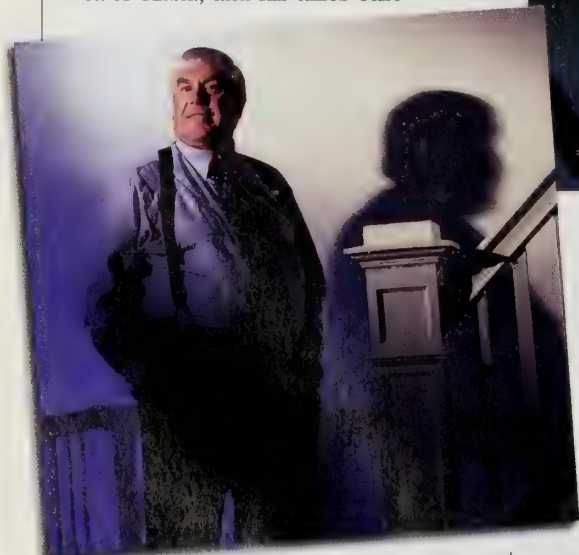
“In today’s NASD, the big are getting bigger—and the small are getting annihilated” — ALAN DAVIDSON, Zeus Securities

mood among its smaller members, he could prevail. That hobbles NASD’s efforts to make its markets more competitive.

This bullfight in a bourse could hardly come at a worse time for NASD. While small firms stew, the group faces an even greater threat to its business from its big members. Securities powerhouses like Merrill Lynch and Goldman Sachs are investing heavily in new trading platforms, called electronic communications networks (ECNs), that divert trades away from NASDAQ’s traditional market makers. The oldest E-bourse, Instinet Corp., is even negotiating a link with NASD’s longtime rival, the New York

firms on Wall Street end up owning them, they’ll have no incentive to help NASD. If NASD can’t align itself with the market players, those players will just keep rolling out NASDAQ.”

FOR SALE. To head off that challenge, Zarb is pursuing a breakup that would convert NASDAQ to a for-profit, shareholder-owned exchange. Shares would be sold to securities houses first, then to the public through an IPO. The board may vote on the outlines of a breakup plan at its next board meeting on July 29. Besides raising new capital to upgrade market technology, the move would give brokerages, especially firms, a stake in NASDAQ—and incent-



ed big-name incumbents to capture two board seats in the first contested election in NASD’s 60-year history. Admission into the boardroom’s sanctum hasn’t dulled Davidson’s tongue or softened his outsider tactics. Now, he’s warming up for Round Two—a better-organized campaign to contest all seven of the seats up for election this fall on NASD’s 32-member board. And with the angry

concentrate trading there, thus un-
dermining the ECNS.
The breakup would also cure the con-
flict built into NASD's structure. The
SEC regulates every securities firm in
the country—firms that are both the
maker and taker of NASD's markets and the
members who select the association's
rules. In the past, NASD resolved those
conflicts by skimping on enforcement.
This culminated in the collusion scandal
of the early 1990s, when NASDAQ dealers
were charged with browbeating com-
petitors to maintain wide and profitable
spreads between shares' bid and ask
prices. NASD has vastly improved its
market supervision. But Davidson & Co.

stocks outside the current 9:30-to-4:00
trading day: 40% of online brokers' or-
ders are placed overnight, a buildup that
contributes to huge volume spikes in the
minutes after markets open.

PACIFIER. But small brokers say they see
no sign that longer hours are needed or
wanted. "My customers say, 'Thank God
it shuts down at 4:00—I don't have to
worry about my positions flying around
overnight,'" says Jay Shartsis, director of
options trading at R. F. Lafferty & Co., a
30-broker New York firm. "But NASD is
shoving this down our throats."

Zarb is now moving to mollify the
small firms. While declaring NASDAQ
ready to meet ECNS in the after-hours, he

largest voting bloc on the NASD board.
But that constitutes only 9 out of 32
seats. And all securities firms, large and
small, face a limit on their clout over
NASDAQ, thanks to a new board structure
imposed in 1996 by the SEC: Only one-
third of governors are from member
firms. The rest must represent the public,
listed companies, or institutional in-
vestors. Says Levitt: "If the NASD goes
backward and starts protecting parochial
interests at the expense of the public in-
terest, it will ruin the institution."

So the small brokers' major power
may have to come through agitation, not
elections. Zarb is trying to ease their
way into the new trading world: by con-

UNDER FIRE

Why NASD is being challenged by its small broker-dealer members

POLICING THE MARKETS

After NASD members were caught
fixing spreads, the SEC ordered NASD to
invest \$100 million to beef up regulation.

SMALL BROKERS SAY

They're being singled out
for enforcement, but weren't
involved in scandal.

NASD SAYS

Stronger regulation was
needed to bolster
investor confidence.

CONFRONTING ELECTRONIC RIVALS

New trading systems have captured 30%
of NASDAQ trading. Big securities firms
are investing in ECNs, which erode
NASDAQ.

NASD's plans to integrate
ECNs are shoving them
aside.

May spin off NASDAQ
in an IPO, selling shares
to brokers to keep their
business at NASDAQ.

STRETCHING THE TRADING DAY

ECNs plan to start offering evening and
early-morning stock sessions, extending
NASDAQ's and NYSE's 9:30-to-4:00 day.

They can't afford to staff
up for longer hours.

Must meet public
demand for longer hours,
but wants to delay.

GOING OVERSEAS

NASD has cut deals in Hong Kong, Japan,
and Australia to trade NASDAQ stocks
on foreign bourses.

NASD is catering to Wall
Street's global powerhouses.

Global trading is
inevitable, and small
firms must adapt.

DATA: BUSINESS WEEK

ge that small firms, while largely
innocent in the scandal, are bearing the
brunt of the extra scrutiny and enforce-
ment it produced.

Worse, small brokers charge that
they're not consulted on NASD's new di-
rections. The association didn't submit
its 1998 purchase of the Amex to a mem-
ber vote. Nor has it sought approval
for a plan to trade the 100 most promi-
nent NASDAQ stocks in Japan. "Our mem-
bers don't have a presence in Japan,"
says Davidson. "If a 10-person firm has
monopoly markets 21 hours a day, it
go broke."

The fight over extended trading is fu-
eling the latest small-broker revolt. With
SEC gearing up to offer individual in-
vestors evening and early-morning trad-
ing, NASD declared in May that it could
offer its own extended trading by Sep-
tember. Exchanges, ECNs, and online bro-
kers maintain that investors are de-
manding the freedom to buy and sell

quietly lobbied SEC Chairman Arthur
Levitt Jr. to put the brakes on the move.
The result: A June 30 agreement among
the SEC, NASDAQ, and the NYSE to study
the effects of extended hours, effectively
stalling new trading hours on the major
markets until mid-2000.

Further, Zarb created a small-firm slot
on NASD's board—in addition to the seats
won by Davidson and an ally—and ap-
pointed a Small Firm Advisory Board.
Stephen J. Perrone, chairman of North-
east Securities Inc. in Uniondale, N. Y.,
and a member of the nominating com-
mittee for this fall's board contest, says
he's urging the panel to include small-
firm brokers and entrepreneurs among
the seven official board candidates. But
that's unlikely to blunt the Independent
Broker-Dealers' challenge.

But small firms face tough hurdles in
trying to wrest control of NASD. If David-
son's seven-person slate wins in Decem-
ber, small broker-dealers will have the

trading with clearing firms—dealers that
handle back-office operations for other
brokers—to manage small firms' after-
hours operations. NASDAQ may also offer
a link on its Web site where small firms'
customers can buy and sell stocks, with
the trade credited to the broker.

But catering to the small firms, while
good internal politics, may be bad busi-
ness for NASD. "Extended hours, over-
seas trading—it's not a question of
whether, it's just when," says Washington
lawyer and former SEC Commissioner
A. A. Sommer Jr. The need to coax small
brokers along can only hamper NASD in
its struggle to compete. Little of that
matters to the small brokers: They're
more ready to fight than switch. Zarb
may be preparing to move his markets
into the 21st century. But the way his
smaller constituents see it, that will hap-
pen over their dead bodies.

By Mike McNamee with Paula Dwyer
in Washington

BANKING

NOTHING BUT NET

Bank One's Wingspan leaves bricks and mortar behind

John B. McCoy is a changed man. In the past 15 years, the Bank One Corp. chief executive has bought 119 banks, culminating with the \$30 billion acquisition of First Chicago WBD Corp. in April, 1998. But McCoy says he has stopped shopping. From now on, he's determined to reach new customers through the Internet. "It changes everything," says McCoy, 56.

Skeptics might see McCoy's zeal for the Web as a cover for more material issues, such as the integration of First Chicago into the Bank One fold. Indeed, Wall Street analysts have been disappointed with McCoy's slow progress in cutting expenses at the combined institution, whose \$256 billion in assets makes it the fifth-largest bank in the U.S.

But McCoy is doing more than talking about the Net. From a tech nobody without a Web site two years ago, Bank One has emerged as one of the most aggressive big banks in cyberspace. Its recently revamped Web site serves 350,000 online customers, and McCoy is spending millions on marketing deals with Web portals such as America Online, Yahoo!, and Excite to pull in more. And in perhaps his boldest move, McCoy is setting up a standalone subsidiary to offer branchless banking under a new brand—WingspanBank.com.

McCoy is going where no major banker has gone before. With Wingspan, he's following the lead of smaller, low-cost Net banks, which offer higher rates on deposits and lower rates on loans (table). Wingspan customers will have access to Bank One automated teller machines, but not to its 1,900 branches, which serve 9 million households in 14 states. In other words, Wingspan will compete with Bank One—and McCoy admits it will take away customers. "If you're going to be in E-commerce, you have to build a business that destroys the old brick-and-mortar model," says McCoy, who became the third McCoy to head the bank when he succeeded his father in 1984.



WINGSPAN: READY TO FLY?

Bank One's offspring may be a better deal than the parent

- Interest rate on checking is 4.5%, vs. Bank One's 1%
- More than 7,000 mutual funds from various companies vs. only 48 funds from One Group
- Product offerings that come from 60 mortgage companies and 15 insurance carriers
- Free electronic bill payment vs. Bank One's \$4.95 a month
- Concierge services

DATA: BANK ONE

McCoy's move dramatizes how much is at stake for bankers on the Net. For decades, banks have been losing business to mutual-fund companies and investment banks. Now, anyone with \$15 million in capital, a Web server, and a marketing plan can win approval for a branchless bank on the Net. And while there are only seven Federal Deposit Insurance Corp.-insured Net banks—accounting for less than 2% of online banking customers, according to market research firm Datamonitor PLC—their cost structures enable them to outbid traditional banks for deposits.

In theory, banks should embrace cyberspace because it's cheaper to serve customers there than at branches. But customers may want service both at a

branch and on Web—raising rather than reducing bank costs. For now, bank sites are little more than electronic brochures, says banking analyst Joel Friedman of Andersen Consulting. "Toes in the water of the electronic omy," he calls them.

FANCY EXTRAS. Not Wingspan. Unlike the Bank One site, which sells only bank's products, Wingspan will offer mortgages, insurance, and investments from multiple vendors. It aspires to be more a portal—providing bill-payment services for nonsubscribers and such fancy extras as an E-concierge service that can identify the best restaurants in Tuscany.

Wingspan figures to be a formidable competitor to smaller Internet banks, though it will likely soon have to contend with similar offerings from the big banks. "They're probably willing to take some losses to build a relationship," says Chris Musto, online banking analyst with Gomez Advisors Inc. "They'll nibble their profits later."

Or they won't. The company estimates the \$150 million or so it intends to spend on Wingspan in the next year will knock about 5¢ off earnings. It's projecting the Net bank will add 5¢ to earnings the following year. A.G. Edwards & Sons Inc. analyst Diana Yates thinks Wingspan may be just the first of many Internet brands that Bank One will launch. "There's no reason that Bank One can't roll out 20 banks like this one," says Yates. Given McCoy's ambitions, the idea isn't so farfetched.

By Andrew Osterland in Chicago

WHO NEEDS THE STREET, ANYWAY?

d of neglect, small caps like St. John are going private

though affluent women across the U.S. flock to St. John boutiques to buy Australian wool suits, the fashion company's stock been out of fashion for some time. So on July 6, St. John Inc., fed up with its lowly valuations, closed up shop on the New York Stock Exchange and went private. "We'll be able to do what we think is best for the company as opposed to what Wall Street might think," says Robert E. Gray, the Irvine, Calif. company's chairman and CEO, when he announced the move in February.

More small companies, weary of being Wall Street's playthings, are going private. In the past year, 48 companies with market caps under \$1 billion have announced they are going private, vs. only 12 three years ago. And in 1998, there were almost 800 small companies acquired in either mergers or buyouts, up from around 450 two years earlier, according to U.S. Bancorp Piper Jaffray Inc. "Aside from Internet stocks, the small caps have been permanently hurt by a lack of interest in investing to larger companies," says Daniel J. Donoghue, a managing director at the firm. In fact, the stock of half of the 100 small companies that went public in the last decade sold for less than 10% of the initial offering price. And while the earnings of these companies grew over the last three years at an average annual rate of nearly 19%, they wonder small stocks are cheap—trading on average at 17 times earnings, vs. 22 for large-cap stocks. That's why buyout firms are scooping up these companies, taking them private.

Small companies complain that they can't get Wall Street's attention. Indeed, companies in the \$50 million to \$250 million market cap range have an average of 2.5 analysts covering their stocks, vs. 10 analysts for companies over \$250 million, according to Piper Jaffray. To make matters worse, analysts who cov-



GRAY: Stock market pressure led to missteps

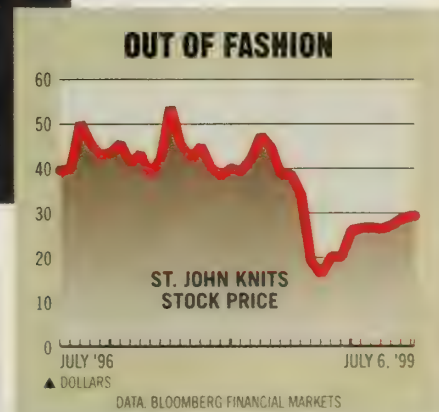
er small caps typically are not the leaders in their field, and often have minimal impact on valuations. "Everyone's looking for high-growth technology issues," says Daniel O'Connell, CEO at Vestar Capital Partners, the firm that provided capital for St. John to go private.

St. John Knits makes classically styled women's clothing that is sold in stores such as Saks Fifth Avenue and Neiman Marcus and through its 17 boutiques located in places such as Palm Beach (Fla.) and New York's Fifth Avenue. The company delivered solid growth for the five years after going public in 1993, averaging 25% gains in revenues and 30% in earnings per share annually. That's twice the apparel industry's average on revenues and triple the average on earnings, according to analysts. Still, Wall Street wasn't sold.

The stock, which posted a high of \$53 in mid 1997, started falling in May of 1998, when the company missed earnings estimates for the first time since going public. The stock continued to drop as St. John missed estimates in subsequent quarters, going as low as \$13 a share in October, 1998, wrapping up trading on July 6 of this year at a buyout price of \$30 a share.

The grueling pressure of meeting Wall Street's earnings expectations forced the company, which posted \$282 million in sales last year, to grow too fast and make mistakes, according to Gray. One misstep was rushing out a cheaper, more youthful line in 1997 that used inferior wool and didn't appeal to the hipper demographic. Going private, he says, will help the company regain its footing. A top priority: slow St. John's growth rate from 25% per year to 10%, something Wall Street would no doubt frown upon. "We need to focus on doing what we do best: delivering the highest-quality merchandise and service," maintains Gray.

CHANGING GUARD. In the buyout, Vestar Capital owns 77% of the new St. John Knits International Inc. The Gray family, which founded and still runs the company, owns almost 16%. Public shareholders will hold the remaining 7%. "Many small com-



panies, especially family-run businesses, don't want to be acquired by larger companies, but want to go private and retain control," says Donoghue.

Will small companies continue to seek safer harbors by going private? That depends on whether or not small-cap stocks continue to be pummeled. Most experts say that these stocks should stage a comeback soon—indeed, there may already be signs of a recovery. But if they are wrong, more companies like St. John will be going fashionably private.

By Marcia Vickers in New York

COMMENTARY

By Mike France

HOW THE HIGH COURT IS PENALIZING CORPORATE AMERICA

Convinced that the federal government has way too much power, five of the nine justices on the U.S. Supreme Court are on a crusade to hand authority back to the states. While such a constitutional battle may seem far removed from the world of business, one of the court's latest states' rights rulings could end up stinging many companies.

Released on June 23, the final day of the Supreme Court's term, *Florida Prepaid Postsecondary Education Expense Board vs. College Savings Bank* is a scary example of what can happen when the Supreme Court puts ideology before practicality. The case centers around a patent that the bank won after devising a special certificate of deposit paying out interest pegged to the rate of increase in college expenses. When a State of Florida agency began selling the same product, the bank sued for patent infringement. In response to the suit, Florida made a bold claim: that states are constitutionally immune from federal intellectual-property laws under the doctrine of sovereign immunity.

GREEN LIGHT. To the shock of many intellectual-property experts, the high court bought Florida's arguments. The mind-boggling upshot: States now have virtually a free pass to ignore U.S. intellectual-property law. Given the massive amount of commerce between businesses and states, the case has the potential to hurt Corporate America in a wide variety of ways. "Watch out if you publish software that someone at a state university wants to copy for free," warns Bill Scanlon, an intellectual-property attorney in Madison, Wis. "Watch out if you own a patent on a medical procedure that some doctor in a

state medical school wants to use. Watch out if you've invested heavily in a great trademark, like Nike's Swoosh, and a bureaucrat decides his state program would be wildly promoted if it used the same mark."

For many corporations, one of the most frightening implications of *College Savings Bank* is that the ruling could give state universities a big advantage in the race to patent new technologies. Over the past few years, state and private schools alike have started to recognize that they produce

a treasure trove of valuable research and have begun to move aggressively into the business of selling it (chart). That often puts the universities in direct competition with some companies. Over the past year, for example, Florida State University has taken in \$51 million from patents on the manufacture of the anticancer drug Taxol.

The fact that state schools are beginning to milk serious money out of their patent portfolios is a healthy trend. However, as the profit flow increases, schools are inevitably going to clash more frequently

with companies. A fierce battle is now raging, for example, between Genentech Inc. and the University of California, which claims the biotech firm infringed on its growth-hormone patents. While there's nothing wrong with state universities suing companies to protect their commercial rights,

the *College Savings Bank* decision unfairly prevents companies from fighting back. It also, for no good reason, treats state schools differently from private institutions such as

Stanford and Columbia—which are still fully subject to intellectual property laws.

"MAKES NO SENSE." That lack of logic outrages many patent specialists. "The decision makes no sense," says University of Michigan Law School Professor Rebecca S. Eisenberg. She asserts that it springs from "a bizarre states' rights agenda that really has nothing to do with intellectual property."

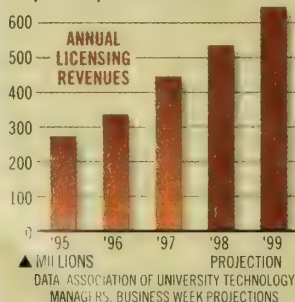
Unfathomable as *College Savings Bank* may be, however, it is no mere lower-court decision that a sensible appeals court can overturn. Because of the Supreme Court's role as the final arbiter in America's political balance of power, the decision is now a bedrock precedent that even Congress can't entirely undo. In a dramatic oral dissent delivered immediately after the majority on the court announced the decision, Justice John Paul Stevens likened the court's new ideology on state sovereignty to a "mindless dragon" chewing holes in existing law. That dragon just took a big bite out of the property rights of Corporate America.

Legal Affairs Editor France follows patent law from New York.



INTELLECTUAL GOLD MINE

The amount of money universities reap from patent licenses is soaring





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your Net, keep in mind that our servers
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Carly Fiorina has a silver tongue and an iron will. When the 44-year-old was considering the CEO post at Hewlett-Packard Co., she met board member Richard A. Hackborn for lunch at the Gaslight Club in Chicago's O'Hare airport. Hackborn, who had built HP's printer business into a gold mine in the 1980s, had decided to leave HP's board to devote his time to charity work.

But over salads and "what felt like 10 gallons" of iced tea, Fiorina persuaded him not only to reconsider but also to step up as chairman. "You can't tell me there's a better person for the job," she told Hackborn as Gaslight's waitresses, clad in skimpy uniforms and fishnet stockings, made their rounds. Over the course of three hours, Hackborn agreed. "And no, I did not put on fishnet stockings," Fiorina says with a laugh. "Don't even go there."

It will take all of the charm and mettle Fiorina trotted out that afternoon to get her where she wants to go at HP. On July 19, the granddaddy of Silicon Valley announced that Fiorina would become its new chief executive, making her the first woman to head a Dow 30 company—and the first

outsider to take the reins of the venerable computer

Cover Story

giant. Indeed, in HP's 60-year history, this is the first time it has reached beyond its homegrown troops for any of the top jobs at the company, let alone Numero Uno.

But then, these Internet times are anything but business as usual. With rivals IBM and Sun Microsystems leading the E-business revolution, HP has seemed little more than part of the clueless Establishment. That's why the company has gone to the outside for a fresh face and a fresh approach. Fiorina's challenge is a ticklish one. In the coming months, she must strike a delicate balance between propelling HP's stodgy

Carly Fiorina's challenge will be to propel staid Hewlett-Packard into the Internet Age without sacrificing the very things that have made it great

culture out of its moribund ways and into the high-speed Net Age while not losing the elements that have made the company an American icon—its deep engineering roots and its good, old-fashioned dependability. "Some might say we're stodgy, but no one would say this company doesn't have a shining soul," Fiorina says.

The star executive from Lucent Technologies Inc. may be just the person to bring out the best, again, at HP. Just as the computer giant needs to shed its lumbering ways, so too did Lucent—AT&T's slow-moving communications-equipment business. Fiorina managed the highly successful spin-off of Lucent in 1996. She then launched a bold, \$90 million brand-building campaign that helped transform the company from a humdrum maker of phone equipment into an Internet player supplying the gear for the New Economy. And in 1998, after

being promoted to president of Lucent's \$19 billion global vice-provider business, she helped to turbocharge product development by the long-coddled Bell Labs engineers: "It has it all," crowds Vodafone AirTouch PLC Chairman Ginn, an HP director who headed the search committee.

Now, Fiorina is going to try to do it all over again. In an extensive BUSINESS WEEK interview just one day after her announcement, she mapped out a set of priorities for herself. One is to craft a compelling vision of HP as an Internet company that can stitch together a vast range of products from \$25 inkjet cartridges to \$1 million supercomputers for any customer that has to compete in the online and offline worlds. "Customers need a sense of how HP's broad product portfolio translates into real advantages for them," she says. "We haven't given them that yet."

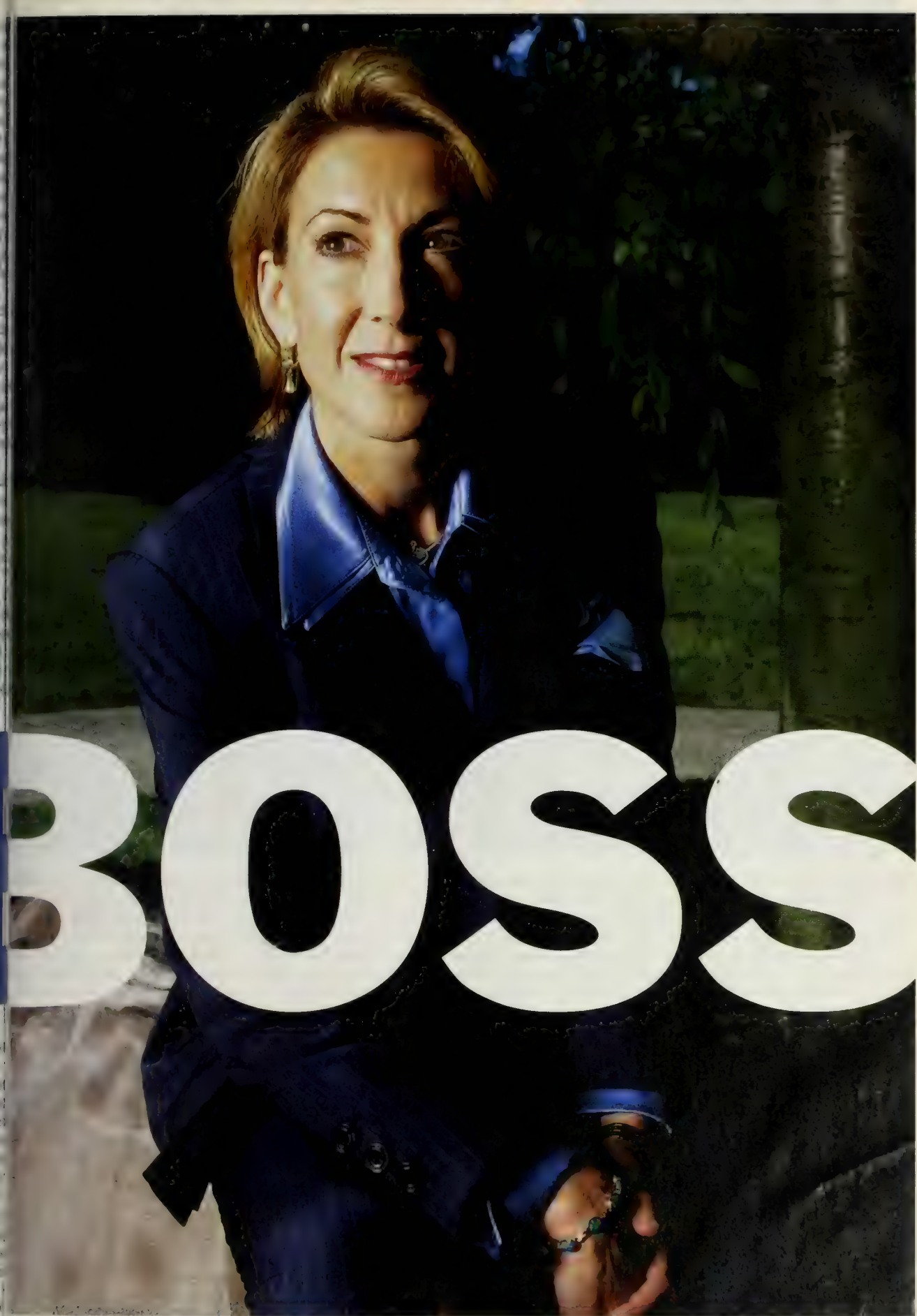
LONG DROUGHT. Jump-starting HP's innovation machine tops on her list, too. HP hasn't had a mega-breakthrough product since the inkjet printer was introduced in 1984. Until recently, even its record on shipping new versions of computer servers has trailed rivals. "It's not rocket science that we need to be innovating at a rapid rate," Fiorina says. Then there's the problem of HP's staid brand. While synonymous with quality, "we have to make sure it represents the next century rather than the last one," she says.

And, unlike her predecessors, Fiorina must recalibrate HP's vaunted culture, dubbed the "HP Way." Founders Hewlett and David Packard were renowned for emphasizing teamwork and respect for co-workers. But in recent years, that has translated into a bureaucratic, consensus-style culture that is at a sharp disadvantage in the Net-speed era. "We don't have this ready, aim-aim-aim, fire culture," says Bain & Company consultant Vernon E. Altman, who has worked with HP. "These days, it has to be aim, fire, re-aim, re-fire." Dispensing of the bad habits while retaining the good shouldn't be a problem, says Fiorina, who plans to use a scalpel and a machete. "Our people are very proud and smart. So, first

THE

reinforce the things that work," she says, "and then appeal to their brains to address what doesn't."

Can Fiorina, a medieval-history and philosophy major, succeed at this storied engineering company? HP's search committee members say there isn't a better fit. The leaders—Ginn, Hackborn, and current CEO Lewis E. Platt—came by their decision after each one detailed 20 qualities they would like to see in a new CEO. Then they boiled it down to four essential criteria: played to Fiorina's strengths: the ability to conceptualize and communicate sweeping strategies, the operations savvy to deliver on quarterly financial goals, the power to bring urgent change to an organization, and the management skills to drive a nascent Net vision throughout the company. Ginn says the committee looked at 300 potential candidates, four of whom "would have been excellent CEOs. Ginn says the committee looked at 300



MAKING A NEW HP WAY



STRATEGY

PROBLEM HP remains the printer king and is growing fast in PCs, but it almost forgot the Net.

PLAN On May 18, it announced its E-services Net strategy. This pulls together technologies so corporations can quickly add new services on the fly. HP has begun to sell online and intends to grow its services business as a way of boosting box sales.

GRADE E-services is a compelling approach that has struck a chord with many Net players. And **B+** Carly Fiorina's expertise in communications is the perfect complement. There's just one snag: HP is three years behind rivals IBM and Sun in the E-business market.



LEADERSHIP

PROBLEM Outgoing CEO Lewis Platt largely let HP run without setting a clear direction, say critics. And insiders say he should have milked old-line businesses to invest more heavily in the Net and digital photography.

PLAN Once Platt has completed the spin-off of HP's measurement business, Fiorina plans to drive synergies in the remaining printer and computing units.

GRADE Fiorina is the charismatic, brand-conscious leader that Platt wasn't. She learned at Lucent how to turn a stodgy business into a Net Age one. And incoming HP Chairman Richard Hackborn is revered as the keeper of the HP Way. The combination could be dynamic.



INNOVATION

PROBLEM HP built its reputation inventing groundbreaking products, the inkjet printer in 1984 was one. Since then, most of HP's has been in PCs and printers. Cutting costs is as important as coming up with cutting-edge engineers. Meanwhile, promising Net technologies wait in HP Labs.

PLAN Fiorina intends to speed technology transfer from HP Labs. She plans new business models, where instead of being paid for its goods, HP takes a percentage of E-commerce revenues made by its customers.

GRADE The new models are a sign of risk-taking HP needs. **C+** They are no replacement for product breakthroughs.

tential candidates, four of whom "would have been excellent CEOs." Included in the finalists was Ann Livermore, HP's enterprise computing chief. "But Carly was the best," says Ginn. "We see her being HP's CEO for a very long time."

That Fiorina made it into the corporate world at all is a small miracle. Her father was a law professor who moved so often that Carly went to five different high schools. She was extremely close to her mother, a painter who passed away last

December. After graduating from Stanford University with a BA degree, Carly went to

the University of California at Los Angeles' law school to follow in her father's footsteps. But after a semester, she realized she hated law. Although she says that telling her father she was leaving UCLA was one of the hardest things she ever had to do, it gave her a sense of freedom to do whatever she wanted with her life.

PERSONAL TOUCH. She took full advantage at AT&T. After Fiorina started out in the core long-distance business, she made what many thought was a career-killing jump to the Network Systems group, the sleepy telephone-equipment manufacturing business. "It wasn't the choice most people made," says Daniel C. Stanzione, Lucent's co-chief operating officer. But "she's

comfortable in uncomfortable situations." Indeed, she thrived. She became the company's first female officer at 35 and headed the North American operations at 40.

As a leader, she has a personal touch that inspires intense loyalty. She's known for giving balloons and flowers to employees who land big contracts. When Lucent was spun from AT&T in early 1996, Fiorina stayed up all night. Comptroller Jim Lusk and other employees to make sure the prospectus for the stock offering was perfect. And it's not just business: When the wife of a senior Lucent executive fell recently, Fiorina helped make sure he got medical advice, visitors, and emotional support. "I think the world of Carly. She's a great leader," says Nina Aversano, president of Network America for Lucent's global service-provider business.

Fiorina not only brings leadership to HP but also sales and marketing and sales techniques. Her coddling of customers at Lucent is legendary. In early 1998, Bell Atlantic Corp. wanted to cut down the amount of time it took to order telephony equipment, including the digital switching gear that routes voice and data calls around the country. While the process used to take nine months, Fiorina rallied her troops and whittled the time for critical orders down to three months. "She stepped in and made sure it got done," says Paul A. Couture, group president for network services at Bell Atlantic.

Cover Story



ORGANIZATION

HP has struggled to get a balance between decentralization and control. Its history of giving product groups autonomy was useful in simpler times but an obstacle when HP tried to create an overall Net strategy.

By splitting off the test-and-learn unit, HP seems to have found the ground: It has given CEO-like authority to four divisional CEOs, who have authority over the 130 fiefdoms.

This approach will help HP pull together a Net strategy, while also keeping its entrepreneurial bent. There's more to come, like merging the inkjet and printer divisions into one ongoing push.

Fiorina also understands that what customers need is not always what they ask for. For example, when one large telecommunications company requested a switch for their wireless business, Fiorina pressed its executives to tell her why. Once she got a explanation, she realized that Lucent could supply them with a switch that could handle wireless and long-distance calls—for the same price as the original request. "She never tries to sell a customer a box," says Aversano. "I remember we were talking with the chairman of a major Internet company and she asked, 'What keeps you up at night?' It's the attitude that she has."

While Fiorina brings the right attitude to HP, the company has far from floundering before she arrived. Since the March announcement that Platt would step aside to make way for a new president, the company has been on a rip reminiscent of its hard-charging ways. On that day, Platt announced the company would spin off its \$8 billion test-and-measurement division, which had little to do with its faster-growing computer and printer businesses. Platt also set out to make the company more nimble by giving CEO-like authority to four divisional CEOs. And a grassroots movement by a group of maverick engineers and marketers has sprung up in the high-end computer unit that promises to catapult HP into the Internet fray. The computer giant already is reaping rewards. Thanks to a



MARKETING

PROBLEM HP's balkanized approach of hawking stand-alone products does not fly in the Internet Age. Customers want a vision of a future and integrated suites of products to solve particular needs, like E-commerce.

PLAN HP is already planning its biggest-ever corporate-level branding effort, to be rolled out early next year. And Fiorina will build on that by making marketing a top priority.

GRADE The E-services marketing campaign is an improvement, but **C-** HP needs to boost spending and name a chief marketing officer. And the branding campaign won't roll out until next year. That's too long if HP wants to spiff up its stodgy image.



TALENT

PROBLEM HP's turnover is one-third that of the rest of Silicon Valley, but it may not be keeping the right folks. Insiders worry that it's losing top talent due to its old pay practices and is dangerously dominated by lifers attracted by HP's safe, paternalistic ways.

PLAN HP is filling key positions from outside and is considering an expansion of a pay-for-performance policy that was introduced this year for 90 top executives.

GRADE HPers have a long history of rallying when given clear marching orders—and are starting to respond again. **B** Still, HP should move faster to update compensation practices with more stock options.

slate of new products and recovering sales in Asia, growth is expected to return to 13% in the second half of the year, up from 2% in the first half of 1999. And HP is gaining share in some key markets. In the sale of inkjet printers favored by consumers, HP enjoys a 42.4% share, including a fast-growing piece of the sub-\$150 printer market, just six months after its entry into that segment. And its \$10 billion PC unit is expected to post 30%-plus unit growth and healthy profits in the second quarter—even as Compaq Computer Corp. and IBM suffer losses. All that has helped HP's once-depressed stock to surge 62% since the beginning of the year, to \$111. "We're putting up some of the best profit margins in a decade," says Platt. "And our growth opportunities are as good as they've ever been."

BLOATED BUREAUCRACY. That's a far cry from HP's prospects just six months ago. The company had been through two years of falling sales and inconsistent profits brought on by the Asian flu, plummeting computer prices, and painful product delays. Quarterly growth ground nearly to a halt, measuring less than 5% year-over-year from mid-1998 on.

To understand the issues Fiorina will have to grapple with, rewind the clock to the halcyon days of the mid-1990s. Throughout the decade, HP had been on a tear. The company's booming success in printers and PCs was driving sales from \$13.2 billion in 1990 to \$38.42 billion in 1996, with profits more than keeping

pace. But problems were developing. With 130 different product groups, the bureaucracy was becoming overwhelming. One example: When four managers from retailer Best Buy Co. wanted some computer products, 50 HP employees showed up to push their units' wares, says a former executive. "I left HP because I did not want to spend 80% of my time managing internal bureaucracy anymore," says Packard Bell NEC Inc. Vice-President Jeffrey L. Cooke, who says he once had to clear an operational change with 37 different internal committees.

Cover Story

HP's culture also began to crimp innovation. Managers often were reluctant to invest in new ideas for fear of missing their quarterly goals. In 1993, researcher Ira P. Goldstein showed Platt a prototype Web browser—two years before Netscape Communications Corp. became the first Internet superstar with its Navigator browser. But after an enthused Platt told Goldstein to run it by the company's computer division, his browser died an ignominious death. "They just couldn't see how it would help them sell more computers," Goldstein recalls.

And Platt, a 33-year veteran, found it difficult to counteract the malaise. Despite the lack of new products, he issued no inspiring call to arms. Instead, he continued to focus on the softer side of the HP Way. During the mid-90s, his personal *hoshins*—Japanese for stretch goals—included promoting diversity in the workplace and a more humane balance of work and personal life for HP employees. That might have been a noble goal, but it did little to crank the company up to Net speed. "I think people at IBM work just as hard as HPer, but [IBM CEO Louis V.] Gerstner isn't running around talking about work/life balance," says one former HPer now at IBM. "It was like our own chairman didn't realize how tough it was out there." Platt fumes at such a notion. "I don't see these so-called soft issues at odds with the tough business environment we're in today," he says. "Anyone who calls this stuff soft is soft himself. These are major issues for all CEOs." Indeed, Platt's focus on hiring women paved the way for Fiorina and other women to reach top management at HP.

"CHESS GUY." By late 1997, employees were crying out for stronger direction. That December, a poll of the 300 top staffers revealed that HP's workers thought the company needed an infusion of new thinking and more customer focus. Stunned, Platt tried to take action, say insiders. At the annual general managers meeting in January, 1998, Platt lambasted managers about the need to be more creative. But the speech backfired. Rather than being energized by Platt's talk, many executives grumbled that Platt was asking them to fix HP's ailments when he was the problem. What they needed was decisive leadership. Says a consultant who worked with Platt at the time: "Lew is a man of great integrity, but he seemed like a chess guy in a video-game world."

By last summer, with revenue growth slowing to low single-digits, Platt began to make dramatic changes. He hired McKinsey & Co. to explore a variety of radical restructurings—ultimately deciding to spin off the test-and-measurement unit. Even more important, Platt put his own job on the line: He wanted the board to consider hiring a new CEO. The board took him up on the idea, leading to Fiorina's hiring.

Platt's moves have clearly paid off. In recent months, HP



CARA CARLETON S. FIORINA

BORN Sept. 6, 1954.

EDUCATION BA in medieval history and philosophy from Stanford University in 1976. MBA in marketing from University of Maryland in 1980.

CAREER HIGHLIGHTS Helped manage Lucent's spin-off from AT&T in 1996, overseeing the company's initial public offering as well as the flash marketing campaign that positioned Lucent as a Net company. In 1998, she became president of Lucent's global service-provider business, the \$1 billion unit that sells equipment to the world's largest telephone companies.

WHAT SHE WAS KNOWN FOR AT LUCENT Her long work hours and her thank yous. When employee landed a significant contract, she often celebrated by giving them balloons, flowers, and other gifts.

WHAT KIND OF NAME IS CARLETON In the Civil War, Fiorina's father's family lost all the men named Carleton. In remembrance, each descendant of the Sneed family names either a son Carleton or a daughter Cara Carleton. Cara is the ninth Cara Carleton since the Civil War.

HARDEST THINGS SHE EVER HAD TO DO Leaving Lucent was most difficult. Close second was telling her father, Joseph Sneed, a federal court judge and law professor, that she was dropping out of law school after one semester at UCLA. "He's over that now," she says, laughing.

WHY SHE ALWAYS LOOKS SHARP Two words: Giorgio

Armani. Fiorina swears by the Italian designer. Other favorites include Versace and Dolce & Gabbana.

WHAT GETS HER UP AROUND 4 A.M. Working out and feeding wild birds. "It's good thinking time," says the new HP CEO.

OTHER HOBBIES She and her husband, Frank Fiorina, now retired, spend lots of time boating. Even though their first boat lacked sleeping quarters, they would spend weekends sleeping on it. Now, their *Alchemy*, a 52-foot boat with proper sleeping space is moored in Jersey City.

FAMILY LIFE Married for 15 years, she has two stepdaughters and a three-year-old granddaughter, Cara, who calls her C.C.

WHOM SHE ADMIRES MOST Her mother, Madelon, who passed away in December. "She was the strongest person I've ever known. She had an unquenchable zeal for life," Fiorina says. "She worked incredibly hard to make me the best person I could be."

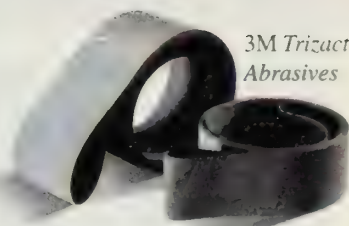
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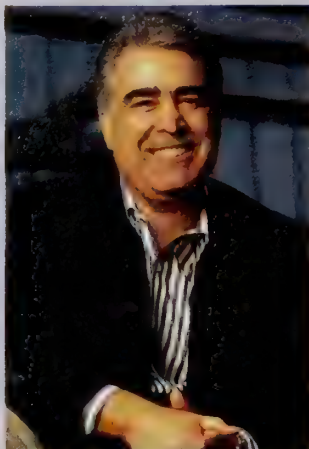


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3M *Innovation*

HP'S EXECUTIVE BRANCH



ANTONIO PEREZ

INKJET IMAGING CEO, \$7.7 billion in sales. While maintaining HP's market-share dominance, he's intent on making it a digital photography leader as well.



ANN LIVERMORE

ENTERPRISE COMPUTING CEO, \$13 billion in sales. As key architect of its E-services strategy, she emerged as HP's top internal candidate for CEO.



CAROLYN TICKNOR

LASERJET IMAGING CEO, \$9.2 billion in sales. A take-no-prisoners operations whiz, she wants to pioneer E-publishing—the ability to manipulate images in cyberspace.



DUANE ZITZNER

PCs CEO, \$9.9 billion in sales. Hypercompetitive, his manic focus on execution has enabled HP to avoid the big PC losses suffered by other top PC makers.

DATA: SALOMON SMITH BARNEY

has gotten its act together, pumping out products and keeping costs down, while devising the first glimpses of a bold Internet strategy. In Platt's last days, he can bask in the marked improvements. But so, too, can a band of mavericks who decided they would push change up from the bottom.

It started in April, 1998, when Ann M. Livermore, then head of software and support, joined with Unix computer chief William V. Russell to explore a Net strategy for HP. By the end

of a powwow between their highly independent groups, Livermore and Russell had agreed

to cooperate to commercialize a host of Web technologies. "This was a big deal—like bringing two armies together," says Nicholas J. Earle, chief marketing officer for HP's Enterprise Computing Solutions Div. "The Net became the great unifier."

In September, Livermore and other execs worked to figure out how to turn HP's gaggle of more than 20 stand-alone products into compelling wares for the Web. They packaged computers and software from the two divisions into simple, problem-solving packages for buyers, such as technology for helping small companies set up shop on the Web. Bolstered by this progress, Russell and Livermore took a radical step: They asked Platt to merge their organizations—and pledged their support regardless of who got the top job. "We said combine our divisions, and do it now," says Russell, who agreed to be Livermore's second-

in-command when Platt O.K.'d the merger on Oct.

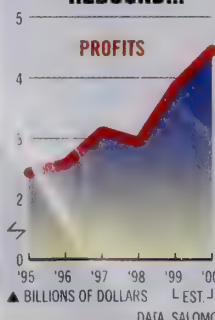
Livermore appointed Earle to pull together a strategy and marketing plan—within three months. Says Livermore, "I told him I wanted to get at least three complaints a day about him. I wanted him to push too hard."

WINGING IT. The charismatic Brit did not disappoint. Nov. 12 meeting of Livermore's new Enterprise Solutions unit, Earle laid down the new, not-so-democratic rule of the course of a four-hour presentation. "One of the sacrifices we killed was every individual's ability to influence decisions," says Earle. And on Feb. 3, before HP's executive committee had given the thumbs up, Earle told Wall Street analysts of the Net push—and of an accompanying \$100 million marketing campaign. Back at the office, Russell asked him, "Where'd you get the \$100 million?" Earle's response: "I haven't yet." Russell figures Earle's gambit eliminated months of internal debate. Says Earle: "HP was like a herd of 46,000 wildebeest. Everyone knows we're there, but we're just meandering around. I wanted to cause a stampede and then figure out where we're going."

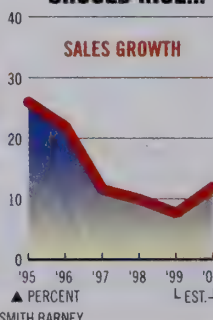
If Earle was fast earning a reputation as HP's top workhorse, Livermore backed him up all the way. She persuaded Platt to let her reduce her near-term profit goals to make room for the \$100 million marketing campaign. And she gave tenant Nigel de la Motte a carte blanche to spend \$1 billion on acquisitions, equity stakes, and partnerships to fill holes in HP's technology portfolio. The result: a firm

Cover Story

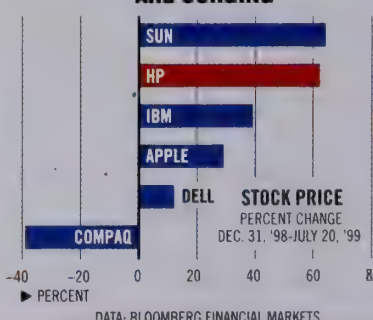
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LEADERSHIP OVER THE YEARS



DAVID PACKARD & BILL HEWLETT

1938-1978 "Bill and Dave" set up shop in a tiny Palo Alto (Calif.) garage in 1938—and built a company that became the model for thousands of subsequent Silicon Valley startups. With equal parts technical and business genius, they created an informal, egalitarian culture where brilliant engineers could shine.



JOHN YOUNG

1978-1992 Young oversaw HP's rise into a major computer company—something AT&T, Honeywell, RCA, and other first-generation electronics companies failed to do. But as the 1990s began, Young's efforts to corral HP's independent units led to bureaucracy that got HP badly bogged down.



LEW PLATT

1992-1999 A well-liked engineer who joined HP in 1966, he was an operations expert and devoted practitioner of the HP Way—perfect qualifications to oversee HP's growth in the mid-1990s. But when PC prices and Asian sales tanked in 1997, HP wasn't prepared for the next big wave: the Internet.



CARLY FIORINA

1999 She helped turn Lucent Technologies from a stodgy maker of telecom equipment into a high-flying Net stock—exactly the task at hand at HP. Known for her brand-building and leadership skills, she joins HP when it has a head of steam in its main markets as well as a new direction for the Net.

of 10 deals since February. "They were wanting to move a mountain in a hurry," says Security First Executive Vice-President Charles W. Ogilvie III, who signed an equity deal with Livermore in less than two weeks.

What's more, Livermore wasn't just looking to play catch-up but to forge entirely new ways of making money on the Web. Rather than get paid for computers, HP would give away gear for next to nothing in exchange for a cut on customers' future Net-related revenues. While

it's a risky plan, HP has earned kudos for

taking bold steps. "Unlike Sun or IBM, HP wants to participate in our business rather than just be a supplier," says Gadi Maier, CEO of the Internet Travel Network, an E-commerce site. "This is much more than just HP's attempt to get on the Internet bandwagon."

YAHOO! DEAL Indeed, HP is quickly developing into a credible competitor in cyberspace, say analysts. Yahoo! Inc., which was unimpressed when it first heard HP's E-services pitch, is about to announce a deal to use HP technology to help corporations build their own portals, says an HP insider. Yahoo! Vice-President Ellen Siminoff says, "they're really trying to turn themselves into an Internet company, and they're making good progress."

The six-month flurry has been an elixir at HP, but it's barely a drop toward achieving Fiorina's top goals. Now she must take the break-the-mold spirit in Livermore's group and infuse it throughout HP's mammoth organization of 123,000 people. One way is to tackle outdated compensation practices. Employees receive salary, bonuses, and small profit-sharing checks twice a year—but almost no stock options. Just as Fiorina's HP compensation package is based almost entirely

stock and options, experts say HP needs to move in the right direction companywide. "It's an area I'm looking at as a priority," Fiorina says.

HP's services business could use some beefing up, too. To compete with other companies scrambling to reengineer their operations to take advantage of the Net, they are turning to big companies for new gear and consulting help. IBM, for one, has been cashing in: Its Global Services unit jumped from revenues of \$1.5 billion in 1996 to \$23.4 billion last year. To get into the ballpark with IBM, which has 130,000 consultants to HP's 24,000, analysts think Fiorina will seek a big acquisition, maybe even a giant like Electronic Data Systems Corp. Judith S. Hurwitz, president of consultancy Hurwitz Group, says, "You will start to see acquisitions. It's what HP has to do."

Then there's the task of getting even more out of the printer business. With its market dominance, HP has a chance to become a leader in so-called E-publishing—combining computing power with communications smarts to revolutionize the way data and images flow and are printed from cyberspace. So far, HP has blunted its clout by having its inkjet laser-printer groups following separate agendas. Insider: Fiorina may consider combining them into a \$20 billion division, a notion that has been discussed for some months.

By coupling the new emphasis with Hewlett-Packard's traditional strengths, Fiorina believes the company has turned its back on the dark days for good. "The people of HP are very smart," she says. "They're pretty clear on the things they need to work on." If not, Fiorina has the will to lead them the new HP way.

*By Peter Burrows in Palo Alto, Cal.
with Peter Elstrom in New York*

Cover Story

A hand is shown dipping a bottle of Maker's Mark into a bowl of red wax. The bottle is partially submerged, and the wax is dripping down its sides. The label on the bottle is visible, showing the 'Maker's Mark' logo and the 'Siv' logo. The background is a plain, light color.

Looks like
someone didn't
pay attention
during the
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THE LONER

CEO F. Duane Ackerman has so far focused on go-it-alone strategies

TELECOM

IS STANDING FIRM ENOUGH?

To survive, BellSouth may have to expand nationally

It's mid-July, and BellSouth Corp. CEO F. Duane Ackerman is riding shotgun in one of the local phone company's service trucks as it prowls Atlanta. The trip is part of Ackerman's twice-monthly visits into the field to take the pulse of the company by talking to employees and customers. This time, after the truck's driver ducks out to take care of a technical problem, a motorist blocked behind the double-parked vehicle begins cursing. Ackerman doesn't miss a beat. He hops behind the wheel and moves the truck. "We don't want to get too far away from what's happening with the customers and our people," Ackerman says as he steps out of the truck.

CEO since 1997, Duane Ackerman is used to being in the driver's seat. But

he will need to steer carefully to avoid being passed by new competitors as the telecommunications industry moves into overdrive. Just this week, Qwest Communications International Inc. agreed to buy Denver-based US West Communications Inc. for \$35 billion (page 88). And that's in the wake of Bell Atlantic Corp.'s merger with Nynex Corp. and SBC Communications Inc.'s takeover of Pacific Telesis Group and its pending deal with Ameritech Corp.

Suddenly, BellSouth is the only one of AT&T's seven offspring still in its original form. But Ackerman may have a difficult time remaining independent unless he takes bold steps to broaden BellSouth's reach and shore up its home turf. And soon. Analysts say that Bell-

South has a window of maybe two years to bulk up before competitors begin hunting. Possible BellSouth targets include Qwest, Sprint, or Global Crossing. Otherwise, says Yankee Group Research Inc. analyst Eileen Eastman, "it's going to be the target of someone."

Is Ackerman worried? "The answer is no," he says emphatically. He's taken a 10% stake in Qwest to prepare for an eventual move into long distance. And he says he's keeping an eye on opportunities to expand into local markets outside of the Southeast. He argues that BellSouth's domestic wireline and international operations will enable the company to grow faster than its rivals. Says Ackerman, a Bell System lifer who began his career 35 years ago as a maintenance supervisor in Orlando, "development can be more than M&A."

FATTER RIVALS. Make no mistake: BellSouth may be a Baby Bell, but it's no small fry. The \$23 billion company provides local service in nine fast-growing markets in the Southeast, runs networks in more than a dozen foreign countries, and enjoys a market cap near \$90 billion.

That's today. Once SBC does its takeover of local operator GTE, each should have a market cap of more than twice that of BellSouth. Either way, they covet the Atlanta Bell's fast-growing Southeastern franchise. Or MCI WorldCom Inc. could have an appetite for BellSouth once the Federal Communications Commission allows the Bells to provide long-distance service perhaps as soon as next year. There are European carriers like France Télécom or Deutsche Telekom, too, who are looking for a foothold in the U.S.

Ackerman, though, seems to relish his wallflower status. He has forged an independent strategy that focuses on providing a broad range of high-quality services in BellSouth's home region while expanding into nearly all of America. And so far, going it alone has worked well. On July 20, the company reported second-quarter earnings up 20%, to \$980 million, while revenue grew 8.5%, to \$6.1 billion.

Still, some analysts say BellSouth's strategy is too cautious. With the ability to provide service in all U.S. markets outside of its home region, BellSouth could lose top corporate customers, who increasingly want telecommunications megacarriers.

BellSouth had better watch its back at home, too. This spring, AT&T agreed to plunk down \$110 billion for cable

BELLSOUTH

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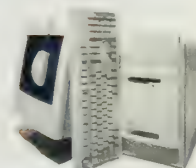
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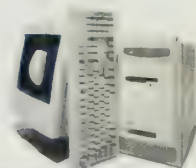
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erators Tele-Communications Inc. and MediaOne Group, which gives old Ma Bell a new conduit for providing everything from local voice to Internet to long distance to cable services. Meanwhile, MCI has invested heavily in fiber-optic and wireless networks serving businesses to link them directly to its long-distance network.

OTHER OPTIONS. The headaches are not unique to BellSouth. But without the scale of its erstwhile Bell brethren, the company will have a tougher time competing with the interlopers. BellSouth, for example, generated \$10.2 billion in cash flow last year, vs. \$21.7 billion for Bell Atlantic and GTE combined, according to Bear, Stearns & Co. That means Bell Atlantic gets more money for new technology and network infrastructure. "The regional fortress strategy has worked very well" for BellSouth, says James A. Attwood, GTE's strategic development chief. "But I think the market is speaking—you need to be national."

So far, Ackerman hasn't confronted the competitive threat head on. In May, he bought the Qwest stake. But after Qwest's bold bid for U S West, an eventual takeover looks less certain. Still, Ackerman does have other options. He might consider an eventual buyout of Sprint, which would bring long distance plus a nationwide wireless network and some local operations. Other potential prey could include Global Crossing Ltd., the loser in the bidding war for U S

TELECOM

THEY'RE MERGING, BUT IS IT WORTH IT?

The Qwest-U S West marriage could be bait for the big boys

Joseph P. Nacchio has been in overdrive since mid-June, when the Qwest Communications CEO launched twin hostile bids for U S West and Frontier Corp. "It's been a bitch," he says, relating a relentless schedule of cross-country dashes and pizza-stained strategy sessions in Qwest's downtown Denver offices. But on July 18, Nacchio won the prize: a \$36.5 billion dollar merger with crosstown Baby Bell U S West. Qwest backed out on Frontier, the Rochester (N. Y.)-based regional phone company, which will merge, as planned, with Global Crossing of Bermuda.

For Nacchio, and investors who have pushed down Qwest's share price 27%, to 32%, the question remains: Is the prize worth it? The hard-charging 50-year-old executive faces a huge challenge merging the two company's cultures—one a feisty startup, the other a monopoly. And bold plans to realize \$12 billion from increased revenues plus lowered operating and capital expenditures between 2000 and 2005 may be hard to come by. Nacchio has to satisfy widely divergent shareholder bases, U S West's nervous labor unions, and state and federal officials. "This will be a very turbulent period for Qwest," says David Barden, an analyst at J. P. Morgan in New York.

Nacchio doesn't disagree. But he sees potential for Qwest's stock to appreciate because its beefier scale will allow it to remain acquisitive in a rapidly consolidating industry. "This is about the industry structure reforming itself in the next 5 to 7 years," he says. "We needed to make some bold moves."

How bold? For one, Nacchio is gutting U S West's dividend from an annual \$2.14 to a nickel. This will free up \$5.5 billion in cash between 2000 and 2005 to

fund Nacchio's plans to acquire a presence in wireless and broaden Qwest's business in Europe and Asia. Nacchio will use that money to accelerate building of high-speed digital subscriber line (DSL) links in major cities serving rivals SBC and Bell Atlantic. Then Qwest could offer end-to-end broadband connections and applications such as remote software and Web hosting.

Still, Nacchio risks losing focus. A major problem: merging 9,000 employees at Qwest with 50,000 workers accustomed to the slower pace at U S West. Nacchio estimates that job cuts will number only "a couple hundred over time." Analysts expect more cuts will have to go.

TOO SMALL? While more, the big synergy between the two companies—the ability to pump voice and data traffic from U S West territory onto Qwest's high-speed national fiber-optic backbone—can't happen until the FCC rules the Baby Bell has opened its lines to more competition. That is likely

several years away, says U S West's Solomon D. Trujillo, who joins Nacchio and Qwest's founder and top shareholder Philip F. Anschutz in a newly created office of the chairman. Meanwhile, Qwest will have to divest more than \$200 million in long-distance businesses it now does in the region.

Indeed, Nacchio may not get the chance to feed his voracious appetite. With a market capitalization of \$53 billion, Qwest will be only the sixth-largest U.S. telco—just a quarter the size of AT&T. That means Qwest itself could merge yet again. "Qwest will end up inside a multinational," says Nacchio. For Anschutz, who owns 287 million shares, and Nacchio, with options worth 9.3 million, that may be the real prize.

By Steven V. Brull in Denver

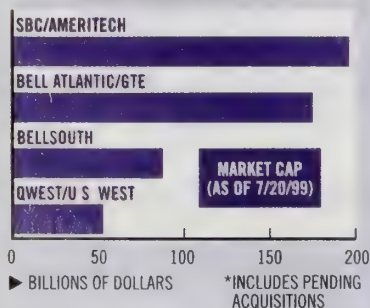


"This is about the industry reforming itself.... We needed to make bold moves"

JOSEPH P. NACCHIO
Qwest CEO

MY, HOW YOU'VE GROWN

TODAY'S SUCCESSORS TO ORIGINAL EIGHT BABY BELLS*



West, or smaller long-distance carriers such as Intermedia Communications. Ackerman could also buy into a player offering local telecommunications outside his area.

Ackerman's mum on all the options, but he won't rule out anything. He says he's just taking time to sort through all the possibilities. With nimble driving, he may steer BellSouth to greatness. If not, there's always the service truck.

By David Rocks in Atlanta

ALMAKERS

MARTY WYGOD RIDES AGAIN



health-care maverick is
ing his bets on the Net
CareInsite, a cost-
ng medical network

Martin J. Wygod is nothing if not single-minded. Ivan L. Rubin, a friend of the drug-industry deal-maker, remembers a walk on a years ago. As they discussed d's latest deal, Rubin looked down noticed that Wygod's feet were bliss. "He was concentrating so much hat he was talking about that he even realize he was burning the of his feet," says Rubin. at's typical Wygod, a man who has to be a feared force in the health-world. A former Wall Street whiz such clients as raider Victor Pos-

ner, Wygod, now 59, made his first big splash in health care in the 1980s with his Medco Containment Services Inc., a pharmacy-benefit management (PBM) company. By wresting low prices from drugmakers to help big customers like General Motors Corp. save money on their mounting pharmaceutical benefits bills, Wygod built Medco into a \$2.6 billion business before selling out to Merck & Co. for \$6.6 billion in 1993. Briefly, Wall Street even thought Wygod might be Merck's next chairman.

Instead, Wygod headed off to California to spend more time with his wife and two young children. But now he's back—and in a big way. Wygod and his team of old Medco colleagues have been quietly building an Internet health-care company called CareInsite Inc. It aims to create an online system that would link physicians, pharmacists, PBMs, and payers such as HMOs—a sort

of electronic hub that would simplify and speed the exchange of information throughout the entire medical community. Doctors will be able to do everything from viewing a patient's medical history or checking test results online to submitting insurance claims and zapping prescriptions to the nearest pharmacy.

Wygod figures that he'll attract plenty of insurers, HMOs, and PBMs because his system will help doctors choose the most cost-efficient treatments allowed by individual plans. And by offering faster medical-claims processing and more readily available information on a patient's medical history, Wygod also is

TRAILBLAZER

Wygod built Medco, a pharmacy-benefit management company, into a \$2.6 billion business

betting physicians will clamor to sign on. CareInsite will make its money by getting a fee for each transaction and by receiving a cut of the savings it expects to generate for insurers.

CareInsite will start rolling out its service in the New York area in September. And with prescription-drug expenses rising 15% or more annually at many HMOs, drugs will be an early target for cost savings. That means that when physicians write a prescription for a pricey drug, they'll get a message showing that a less expensive treatment is available.

But Wygod, who signed a non-compete agreement with Merck, is under fire. In February, the drug giant filed a suit alleging that Wygod's new venture violates his agreement and those of several Medco veterans who followed him out the door because it will rival Merck's PBM. Wygod's noncompete agreement expired in May of this year. But Merck contends that three of his top executives are still restricted for varying periods through September, 2002.

Wygod is fighting back. On July 9, CareInsite filed a series of counterclaims against Merck charging that Merck wants to squash CareInsite because it could pose a threat to the company's market power. It also charges that Merck attempted to hurt CareInsite's June initial public offering by spreading news of the lawsuit to institutional investors. Merck says the counterclaim is without merit. But Wygod insists CareInsite does not compete with Merck's PBM, arguing that it will simply use his system to pass along their information to doctors.

BESIEGED. The Merck lawsuit, in fact, has Wygod feeling so besieged that he now is holding out the possibility that he may go into direct competition with Merck, possibly getting back into the PBM business. "If they attack me," he says, "I might as well [compete with them]."

That's not all he has to contend with. Wygod is scrambling to catch up to hot-shot Healtheon Corp., which is putting together a rival service to provide health-care data over the Net. Healtheon's profits will rely primarily on transaction fees and advertising and subscription sales, says Vice-President Dr. Charles E. Saunders. With a \$4.7 billion market capitalization, Healtheon Corp. has used its rich stock price to do a flurry of deals, including a pending merger with WebMD, a consumer health-care Web site. And on

July 20, Healtheon got another boost when Merck announced its PBM will use an electronic prescription services that Healtheon will develop for a pilot program.

Even without those distractions, however, Wygod faces a herculean challenge in creating a system that links the disparate groups of players in the highly fragmented \$1 trillion industry. And getting physicians, who are often slow to embrace technology, to use it won't be easy. "This is one of the most complex

HEALTH CARE MEETS THE NET

Here are the leading players in the burgeoning Internet health-care market

CAREINSITE

Wygod's company will link doctors, pharmacies, and labs with insurers to keep a lid on costs. The system is out in September, and several New York-area HMOs have already signed up. Since June IPO, the stock has risen 185%.

HEALTHEON

James Clark of Netscape fame launched this hot startup in 1996. Deals, including the merger with medical-information site WebMD, have shares up more than 700% since February IPO.

NATIONAL DATA CORP.

This company, which processes claims and tracks drug sales, partnered with Medscape, a Web provider of medical research, to develop products. Shares flat so far this year.

QUINTILES TRANSNATIONAL

A drug marketing and research company that is pushing into health-care communications with the acquisition of electronic claims processor Envoy Corp. Shares down 29% this year.

DATA: BLOOMBERG FINANCIAL SERVICES, U.S. BANCORP PIPER JAFFRAY

business models we have seen on the Internet," says James W. Breyer, managing partner at venture-capital firm Accel Partners.

Despite the obstacles, Wygod has been picking up momentum in recent months. A Wygod-led holding company, Syntec Inc., which owns 73% of CareInsite, struck a deal in May to pay \$1.1 billion for Medical Manager Corp., which markets software used by 120,000 physicians to manage their practices. Earlier this year, New York-based insurers, including Group Health Inc. and Empire Blue Cross & Blue Shield, agreed to use CareInsite services, which they'll start rolling out this September. And in June, Horizon Blue Cross Blue Shield

of New Jersey struck a similar deal. "They have a clear vision of what they want to accomplish," says William Marino, Horizon's chief executive officer. "That gives them a much better opportunity to succeed than a lot of other players out there."

E-commerce experts also say CareInsite has a good shot. "It's too early to call a winner," says Jupiter Communications analyst David Restrepo. "The race by CareInsite, Healtheon, and others to provide medical information services online. But he believes Wygod will benefit from his deep understanding of how doctors and payers work."

HORSE SENSE. Wygod is going out to put that understanding to work. He spends about one week a month at the company's New York headquarters. The rest of his time Wygod is visiting potential clients, working out of a small office in Manhattan. He lives in a three-bedroom ranch house on 100 acres of hills, where he lives with his wife, Pamela, and their two kids.

It's a long way from his early years in New York City, where Wygod worked as a teenager at Belmont and then at a racetrack. Wygod soon discovered he could make a lot of money betting at the track and developed a lifelong passion for horse racing. Indeed, his career over the years reads like a series of big bets, many of which have been winners. In New York, Wygod formed his brokerage firm when he was 26 and struck it big two years later when he advised Victor Posner on his raid on Sharon Steel Corp. In 1982, Wygod sold off a home-health care business he had built and chased a Posner-controlled vit-

and mail-order pharmacy business of National Pharmacies Inc. for \$36 million. It became the genesis of Medco.

Medco, of course, has been Wygod's biggest win yet. When Merck swooped up the company, Wygod eventually walked off with stock and fees worth more than \$250 million. And soon thereafter, he left. "To be in a large company... is just not his thing," says Al M. Weis, a former Wygod partner now a Syntec director. Putting the squeeze on the big guys like Merck is clearly more Wygod's style. And if he succeeds, Wygod will once again be leading the feet of some old foes to the

*By Amy Berman
in Rancho Santa Fe, Cal.*

Enabling THE Enterprise:

Critical Paths to Excellence in the Digital Economy

The Internet and e-business are respectively fueling and accelerating the transformation of the business value chain. At the helm of this change is the CIO. Long responsible for stewarding the mission-critical applications and information assets that serve as the corporate backbone, today's technology leaders are now at the heart of market innovation. "There's no such thing as an IT problem," announced **Timothy F. Price**, president and CEO of MCI WorldCom Communications, as he opened THE 1999 BUSINESS WEEK TECHNOLOGY LEADERSHIP SUMMIT. "Every IT problem is by definition a big business problem. And sooner or later, every business problem – or business opportunity – looks to IT for a solution."

On May 19, 1999, over 230 senior technology executives from the nation's largest corporations gathered in New York City to discuss the potential successes and problems before them in this new economy. "Enabling the Enterprise: Critical Paths to Excellence in the Digital Economy," was the first in an ongoing series of meetings by *Business Week* to address the critical, strategic needs of senior executives with an interest in the competitive advantages of information technology. The Summit was co-produced by MCI WorldCom and *Business Week*. **Chuck Martin**, author of *The Digital Estate* and *Net Future* and president of The Net Future Institute, served as chairperson.

From the Backroom to the Boardroom

"Whether you like it or not," **Larry A. Kittleberger**, corporate senior vice-president and CIO of AlliedSignal, said, "we're the people who are making this thing happen out there." Leading corporations that recognize the central, pivotal role of information technology have adjusted their organizations accordingly. "At Capital One, we will not start project initiatives unless we have an active participant who can be held accountable from our marketing group, our operations group, and our IT organization," said **James P. Donehey**, senior vice-president and chief information officer of Capital One Financial Corporation. "The integration of IT and the business, right from the get-go, is what makes the opportunities become more real, and certainly something that everyone can achieve."

Todd A. Garrett, CIO of Procter & Gamble Co., boasts of a similar management protocol at his organization. "We have re-embedded 97 percent of the people in the IT organization into the business."

Converge and Integrate

Clearly, the primary driver for aligning IT with the business is the Internet and the advent of e-business



"Sooner or later every business problem – or business opportunity – looks to IT for a solution."

– **TIMOTHY F. PRICE**,
president and CEO, MCI
WorldCom Communications

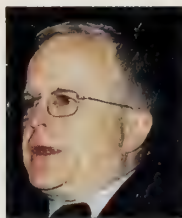
"The integration of IT and the business, right from the get-go, is what makes the opportunities become more real." – **JAMES P. DONEHEY**,

senior vice-president and chief information officer, Capital One Financial Corporation



But to effectively marshal resources for successful and quick deployment of new applications that will facilitate e-business, companies must view their technological infrastructure as a strategic force. For that reason, IT infrastructure has largely remained a corporate function. "The Internet's spectacular arrival reminds us that technology changes everything, but it replaces nothing," said MCI WorldCom's Price. "The challenge isn't replacing past technologies with new ones. The watchwords in our world are converge and integrate, not search and replace."

What Price is referring to are the acquisitions and must-have new technologies that have made integrating disparate systems an organizational and economic imperative for today's forward-thinking company. Without that integration, consistency between technology and business processes is compromised, hindering a company's speed to market. "Infrastructure is really the interstate highway system of the company," explained Peter Solvik, senior vice-president and CIO of Cisco Systems. Kittleberger echoed the sentiment, "Commonality, even though it sounds bureaucratic, gives you the ability to move fast. And the whole name of



"We have re-embedded 97 percent of the people in the IT organization into the business."

— TODD A. GARRETT, chief information officer, Procter & Gamble Co.

the game, I think, as we are going into the e-business world, is speed and flexibility."

Yet these qualities, which are essential to success in the new economy, are the very ones that can cloud and confound an organization's focus. Accordingly, Dave Wagner, vice-president and CIO of infrastructure services at Dell Computer Corporation, approaches the subject of speed and flexibility at Dell with respectful sobriety. "Because of the fast pace, it's very easy to find yourself just reacting and responding to things, and not thinking about 'what is the business value that I'm adding? Am I really pursuing the set of activities that are going to add the highest business value to my business?' We're trying to encourage folks to act like owner-operators. To think about what they're doing, and how it moves the whole Dell business model forward."

Recruiting and Retaining the Talent

Ironically, one of the most formidable challenges before today's technology leaders isn't even about technological resources — it's about human ones. In the U.S. alone, IDC estimates that over three-quarters of a million IT positions need to be filled this year. CIOs are worried about where tomorrow's IT professionals are coming from, and how they can keep the talent they have today. Pre-conference and on-site polling reflected reasons to be nervous. In answer to the question: "If you were offered an incredible opportunity with an Internet startup, how likely would you be to leave your current job?" 80 percent responded that they would be somewhat, or very likely to do so.

So what keeps and draws the talent? According to Donehey, when Capital One, a company that claims single-digit IT turnover, asked its IT professionals why they stay, the answer was "We're working on cool stuff." Cisco's Solvik agreed. "The more marketable your people are, the less likely they are to leave. They tend to leave when they don't feel they're learning skills and when they are getting old on their competence and expertise."

Summit attendees made one thing clear: the question of successful IT



"It's very easy to find yourself just reacting and responding to things, and not thinking about 'what is the business value that I'm adding?'"

— DAVID WAGNER, vice-president and CIO of Infrastructure Services, Dell Computer Corp.

Influence and Privacy in the Internet-World Realm



JAMES A. QUELLA,
vice-chairman,
Mercer Management
Consulting

"There is a trade-off, it seems, between the use of the information and the technology that enables you to have that information." Mercer Management's Quella commented. "Communicating interactively, real-time allows you to serve the customer better, but really does probe into the inner reaches of that customer's behavior and lifestyle, and quite frankly, sort of proactively, may even influence what they do."

That trade-off is "very distressing" to BMG Entertainment's Dinsdale. "On the one hand, you can create environments that target more, tailor more, provide better services — all those are good things. But there is a line...that I think many youth frankly have already crossed, where they're giving up fundamental rights to privacy, and I think that is very alarming." Dinsdale believes that interactivity is as much about control as it is flow. "If you can create an environment where the customer — the individual — can have as much control about what you know and do with the information about them as you do, then that's a fair trade-off."



J. SCOTT DINSDALE,
senior vice-president,
CIO, and chief
technology officer,
BMG Entertainment

Enterprise Portal

Internet and its users continue to evolve, the marketplace is becoming less transactions and more about conversations that reach new heights and offer more value to consumers. Enterprise portals, like the one to be included in PeopleSoft's Business Network, integrate intra- and extra- enterprise content and functionality throughout the value chain allowing customers, companies, employees, and suppliers to exchange information. Participants in the network, such as providers of travel services, employee benefits, office products, and the like, are banking on the edge that their ability to personalize value-add services by company, and by individual, will give them a competitive edge in the digital economy of today and tomorrow. Allied Signal's CIO Kittleberger thinks the digital economy is a good one. "There are a lot of distributors who don't have the value-add and will disappear. But those that are smart on their feet and get that value-add, they'll be there, and I think they'll grow along with it."



"The more marketable your people are, the less likely they are to leave. They tend to leave when they don't feel they're learning skills."

— PETER SOLVIK, senior vice-president and CIO, Cisco Systems, Inc.

ment and retention cannot be purchased with money. Only six percent of companies offered signing bonuses as a good retention strategy, while 42 percent of companies should focus on recruiting, and another 42 percent saw training from within as a company's best option. When asked what companies could do to improve retention, only five percent answered, "pay more money." Solvik, Donehey, and Arrett may all be on to something with their companies, surprisingly, less than half (47 percent) decided, "create programs to move IT staff to business units."

Creating Customer Driven Focus

Integrating IT staff into business units is only a first step, however, for a company that wants to compete in the internet-worked world of the digital economy. "It used to be quite common," said James A. Quella, vice-president of Mercer Management Consulting. "It was a producers' model." Today, one could argue, the value chain isn't just being reformed, it's being inverted. The new infrastructure, product development, production, development, manu-

facturing, and distribution are all increasingly customer-driven. To succeed, companies need to have both the technology and the culture to meet consumer demand for new product and service innovations.

"Ultimately, it's about delivering better value to your customers," determined Wayne Morris, vice-president of corporate marketing at BMC Software. "Today's company must have speed and innovation hardwired into their culture and their processes. They need to recruit and retain the right people, and maintain their infrastructure for 24x7 customer service. That's all central to the digital economy," he declared.

John VanZandt, vice-president of engineering and CIO for Fujitsu PC Corporation, views such moves as emblematic of how technology is enabling businesses to reorganize all of their organizations around the



"Today's company must have speed and innovation hardwired into their culture and processes. That's central to the digital economy."

— WAYNE MORRIS, vice-president of corporate marketing, BMC Software



"Technology is the driving force and support behind the knowledge-based world."

— JOHN VANZANDT, vice-president, engineering and CIO, Fujitsu PC Corporation

customer to meet their demands. "Technology is the driving force and support behind the knowledge-based workforce," VanZandt explained. "Mobile computing has allowed companies to get closer to their customers. They expect employees to be out meeting customers and clients."

Creating a Positive Feedback Loop

While technology now may enable a corporation to create a culture that allows its employees to get close to their consumers, the challenge of effectively capitalizing on this new opportunity remains. According to J. Scott Dinsdale, senior vice-president, chief information officer, and chief technology officer of BMG Entertainment, meeting that challenge means not just getting close, but getting intimate. "You have to understand what's the information you need to have, and that you need to exchange. That's going to build a bridge of intimacy between you and your select level of people that you deal with in this way."

John Parkinson, chief technologist of the global e-commerce team at Ernst & Young, LLP, concurred. "A lot of this is about figuring out what the customer's point-of-view is. It's about instrumenting processes with the right information set so that you can start to manage that customer point-of-view, and then feeding that learning back into the way your business plans and operates itself."

Today, the technology exists to achieve that intimacy. Still, "to do all of this, people do have to cooperate," said **Dr. Peter Cochrane**, head of research for BT Laboratories, net futurist, and author of *Tips for Time Travelers*. "You can't do it all by yourself, that's for sure. No one company has got it all."

Tim Price agreed. "The Internet makes the future possible, but it's strategic partnerships that make it practical."

Making the Investment in e-Business

Practical or not, "Not many people are making money on the Internet," acknowledged **Nancy Raynor**, senior vice-president and general manager of Sabre Business Travel Solutions. "It takes a lot to figure out the business model. Really, it's about the battle for the end customer and everybody wants to own the end customer." Sabre Business Travel Solutions did a lot of market research to determine what would happen to its business as an intermediary or an aggregator in the inter-networked world. "What we forecasted was that the future may not be as bright if we don't play in this new field. It really is recognizing a change that is going to happen and betting on that future."

For companies that haven't yet developed an Internet computing strategy, Cisco's CIO Peter Solvik had

a few words of advice. "A more aggressive approach is probably required for most companies now to make sure they don't fall behind." Companies just getting into the game do not have the luxury of learning along with the market and taking Cisco's "rational experimentation and gradual approach" to e-business. Accordingly, Solvik recommends a bigger up-front investment, "to bet on a couple of different strategies, rather than just one, and being able to develop it over time."

Finding Opportunity in a World of Binary Hegemony

Perhaps the most convincing argument for companies to focus on technology leadership came from BT Laboratories' Cochrane. "The dominant language on this planet is now binary," he announced. "There are far more machines than people. If you look at the network traffic of my company, 40 percent of everything is generated and terminated by machine. By the year 2010, 95 percent of all information flowing on this planet will be machines – just five percent will be people."

As intimidating as that may be for some, Cochrane counseled attendees not to underestimate the opportunities. "The opportunities are coming from a place that most of us are not looking, and they are huge."

"The dominant language on this planet is now binary."

— **DR. PETER COCHRANE**,
head of research for
BT Laboratories; net futurist;
author, *TIPS FOR TIME TRAVELERS*



SUMMIT POLL RESULTS

Results of anonymous polling of 230 delegates at The Technology Leadership Summit. Each had access to a keypad and was able to answer each of the questions asked during the conference.

The education system of today:

- Is adequate for tomorrow's IT needs.
- Can barely keep up with our needs.
- Doesn't realize the need.
- Needs to be totally re-thought for the new economy.

On monitoring employees' electronic behavior, corporations:

- Should monitor behavior more.
- Monitor electronic behavior enough.
- Should back off from what they're doing now.

I view investment in information technology primarily as a way to:

- Cut costs and increase efficiencies in business processes.
- Provide better customer service.
- Develop a more diverse product offering to customers.
- The ultimate weapon to achieve sustainable competitive advantage.

In-hall polling provided by Meridia, Plymouth Meeting, PA



"It really is about recognizing a change that is going to happen and betting on that future."

— **NANCY RAYNOR**, senior vice-president and general manager,
Sabre Business Travel Solutions

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BY OTIS PORT



SENSOR TO CATCH EAR THIEVES

ECONOMIC MELTDOWN IN Russia may pose dangers beyond its borders. Since 1992, there have been seven thefts of Russian uranium products intended for use in weapons, according to a congressional report.

Experts worry that Russia's inability to pay for its energy measures or even to receive regular paychecks for its exports means Russia's uranium stockpile could be targeted by terrorists and other nations.

Part of a U.S. Energy Department initiative to help Russia control its nuclear materials in the Pacific Northwest National Laboratory now has

come up with a device to detect uranium or plutonium. Led by materials scientist Mary Bliss has developed an inexpensive glass-sensor for detecting radioactive activity. Unlike ordinary fibers that merely emit light, these produce a signal. Called Puma (from plutonium measurement and uranium activity), the fibers contain fluorescent compounds that, when zapped by neutrons or alpha rays, emit sparks—similar to the ticking from a Geiger counter.

Puma fibers could be embedded in roads at border crossings and around sites of nuclear weapons and other materials are stored, Bliss says. A prototype detector has just been installed at a checkpoint in a German-Austrian border. Canberra Industries Inc., Meriden, Conn., will make the sensors.

CDs THAT DELIVER WAY MORE THAN MUSIC

WHY SHELL OUT FOR A COMPACT DISK WHEN YOU CAN GET so much free music on the Internet? Atlantic Recording Corp., a subsidiary of Time Warner Inc., thinks it can give music lovers a reason. It's a multimedia enhancement called HyperCD, developed by HyperLock Technologies in Skokie, Ill. The new disks cost the same as ordinary CDs and contain standard music tracks. But when you put the disk in a personal computer and register at Atlantic's Web site (www.atlantic-records.com), you can unlock video clips hidden on the disk or get on mailing lists for news on concert tours. Some day, you may also be able to interact with bands on restricted areas on Atlantic's Web site.

Preempting the free-music movement is only part of the rationale for Atlantic. The company learns who its customers are, what music they like, and how often they listen. It can mine that information for insights on trends. And ultimately, Atlantic plans to market music directly to individuals.

Atlantic Co-Chairman Val Azzoli says HyperCDs have been selling well since their debut in May. That's no surprise, because the latest recordings from such acts as The Gufs, Collective Soul, and Edwin McCain are available only in this format. But Azzoli has evidence that customers also like the value-added features: A surprisingly high 20% of Collective Soul purchasers have registered on the Atlantic site.

Neil Gross

INNOVATIONS

■ If you would like to control your eating behavior and lose a few pounds, Brad J. Bushman, an associate professor of psychology at Iowa State University, has a simple strategy: put a mirror near the dining table and another one on the refrigerator door or wherever you often nibble. Why? It seems people admire themselves too much to watch themselves consuming snacks and sweets. In experiments with college students and supermarket shoppers, people who could see themselves eating consumed 22% to 32% less unhealthy, fat-laden foods than people who gorged without benefit of their own reflections.

■ Someday, doctors might be able to tell patients that spinal cord injuries are not permanently disabling. Neu-

roscientists at Case Western Reserve University's School of Medicine have shown that nerve fibers can regenerate. The researchers transplanted nerve cells from adult mice into rats with severed spinal cords. The new cells grew rapidly toward the cut—stopping only when they en-



countered scar tissue. Much more research must be done, but if a way can be found to bypass or deactivate the scar tissue's chemical roadblock, physicians eventually might be able to repair damaged spinal cords and heal broken necks in humans.

WHY I DON'T FEEL YOUR PAIN

PAIN PERCEPTION CAN VARY enormously among individuals: One person's sore arm is another's debilitating anguish. But don't assume that sufferers should just "put up and shut up." Their pain sensitivity could be genetic.

Researchers at Johns Hopkins University and the National Institute on Drug Abuse say they have discovered variations in a single gene responsible for the molecule that binds with the body's own painkilling chemicals. They report in the July 16 issue of *Proceedings of the National Academy of Sciences* that those variations are probably responsible for differences in pain sensitivity. And because the molecule also binds with morphine, the gene variations could explain why the level of relief from the same dose of morphine differs so much from patient to patient.

The researchers studied the so-called mu opiate receptor gene in different strains of mice and discovered differences in the number of opiate receptors. Furthermore, the quantity of receptors predicted how the mice would respond to a mildly painful stimulus: The fewer the receptors, the more pain the lab animals felt. Also, the mice with sparse receptors required more morphine.

After the mouse studies, the scientists turned to human subjects. They found that the number of mu receptors can differ dramatically among individuals as well. "People have long been skeptical that pain has a genetic basis," says Johns Hopkins neurologist Dr. George R. Uhl. The new finding, he says, could result in painkillers that are tailored to genetic sensitivities.

Catherine Arnst

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SEPTEMBER 30, 1999
Marriott Marquis, New York City

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For more information on The 1999 Business Week Convergence Summit, or to find out more about sponsor and speaker opportunities:

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BusinessWeek Lifestyle



TOURISTS WAITING FOR FLIGHT
AT MILAN'S MALPENSA AIRPORT

What Unites Europe? Delayed Flights

This has been the worst year ever for flying on the Continent

BY CAROL MATLACK

For Alfonso Di Ianni, it was another week of schedule-wrecking delays in Europe's unfriendly skies. On a recent Monday morning, Di Ianni, a Geneva-based vice-president for Oracle Corp., rose at 5:30 to catch a British Airways flight to London for a client meeting. But an hour after the scheduled 8:45 departure, his plane was still on the runway at Cointrin Airport, awaiting clearance for takeoff. It got to Heathrow 75 minutes late. Tuesday, his flight to Amsterdam on British Midland Airways was delayed 45 minutes, and on Wednesday, his Lufthansa flight to Munich was 90 minutes late. "It's a terrible way to live," says Di Ianni.

His experience only confirms what statistics show: This is the worst year ever for air travel in Europe. A third of intra-European flights take off at least 15 minutes late, with average de-

lays running more than 40 minutes. In the 24% of flights run late, and delays are sharp. Apart from causing passenger misery, the quality problem has swelled business costs. Road warriors elect to fly a day early or last-minute purchases of second tickets if their original flights are held up.

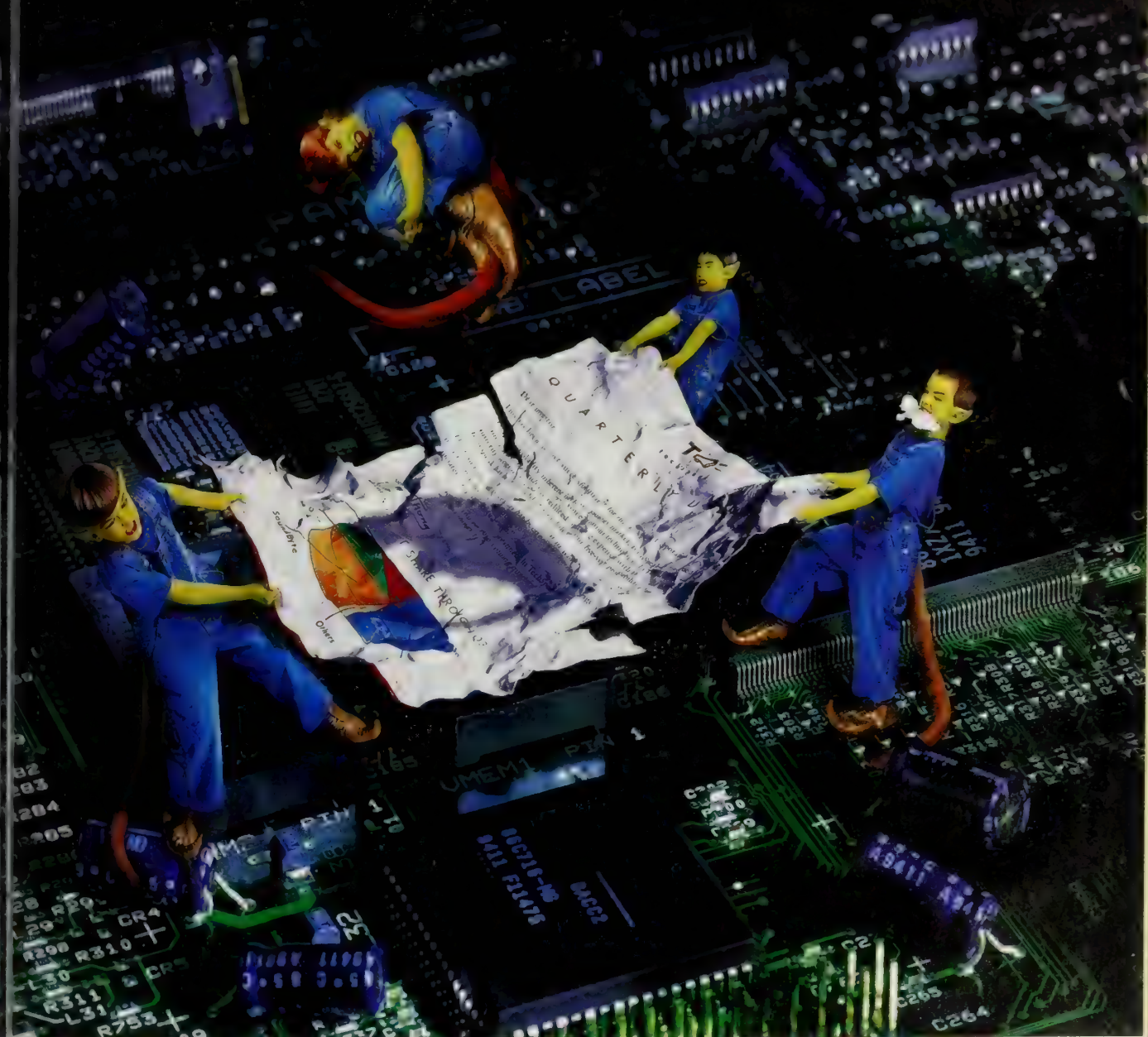
The culprit is Europe's air-traffic system, a patchwork of 49 control centers run by national governments. Each has its own curbs on use of air space, limiting available routes. Planes are funneled into a few busy corridors. Since the late 1980s, the controllers' computer systems have had trouble

Travel

where congestion is developing in time to divert planes to less-crowded routes. Experts say a pan-European system would improve the situation, but that's unlikely to be created soon.

In the meantime, travel agents such as Jean-Jacques Cap of Paris' Cap Voyages agency advise c-

Computer gremlins mangle and abuse
yet another email attachment.



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Europe's Tardy Airports

AIRPORT	% OF DEPARTURES DELAYED*	AVG. DELAY (MINUTES)
MILAN MALPENSA	56.3	47.8
GENEVA	38.6	46.9
MUNICH	35.7	45.3
OSLO	33.6	48.1
ROME	33.3	44.8
AMSTERDAM	32.3	43.1
PARIS CHARLES DE GAULLE	32.1	43.5
MADRID	31.8	45.1
LISBON	31.2	47.6
ZURICH	30.8	43.8

* Flights are counted as delayed if they were late at least 15 minutes. Data is for Jan.-Mar., 1999.

DATA: ASSOCIATION OF EUROPEAN AIRLINES

low enough time to change planes. Herman Mensink, European director of the Association of Corporate Travel Executives, says he routinely requests overrides for connections through

to take early-morning flights, since delays tend to snowball as the day goes on. Passengers also can try to avoid airports where tardy takeoffs are most likely. Identifying them became easier this spring when the Association of European Airlines published for the first time an airport-by-airport listing of delay rates (table). For example, Milan's Malpensa airport is twice as bad as the city's other airport, Linate. In Paris, Charles de Gaulle is worse than Orly. So you might be better off using discount carriers originating from Orly and other secondary airports.

Travelers can ask travel agents to override itineraries programmed into reservation systems, which often don't allow

Frankfurt. "If you are flying into Frankfurt have 45 minutes to connect, you're not going to make it," he says. And Frankfurt isn't on the 10-worst list.

Increasingly, business travelers are turning to Europe's expanding network of high-speed trains, which beat flying on many routes. Times for ground transportation, check-in, boarding are factored in. Rail travel generally costs less, and delays are rare. Lieke Buerger, corporate travel manager for ING Bank in Amsterdam, says ING employees often ride the Thalys train inaugurated last year. The Eurostar, which whisks passengers from London through the Channel Tunnel to Brussels in less than three hours, has lured so many travelers that airlines have cut fares on those routes. Eurostar's round-trip week-end fare to Paris is \$389 vs. \$430 or so on British Airways or Air France. Transatlantic passengers land in Paris, Zurich, Frankfurt, and other major cities can easily hop onto high-speed trains.

But trains aren't the answer for everyone. Di Ianni's trips to London, Amsterdam, and Frankfurt would have taken longer had he gone by rail. For frequent flyers such as Di Ianni, getting to Europe still means long airport stays.

WHAT USING A SUNBLOCK WILL REALLY GET YOU

After years of equating a tan with good health, Americans are running for cover. Thanks to new Food & Drug Administration rules issued in May, now they're also learning just how much cover sunscreen products really provide.

No sunscreen offers perfect protection. So the agency barred such terms as "sunblock," "waterproof," and "all-day protection." Products can claim to be "water resistant" if they last for 40 minutes in water and "very water resistant" if they hold up for 80 minutes.

In part because a product labeled 40 filters only a tiny bit more cancer-causing ultraviolet B rays than one labeled 30—97.5% vs. 97%—the FDA capped the highest rating at "30-plus." Companies have two years to comply.

The FDA has yet to devise ways of measuring how well sunscreens filter out ultraviolet A light. While less powerful than UVB, UVA also is linked to skin cancer. Dermatologists say titanium dioxide, zinc oxide,

methoxy cinnamate, and avobenzone (or Parsol 1789) stop UVA—so you should check sunscreens for these ingredients. But such products generally need to be reapplied at two- rather than four-hour intervals.

For maximum protection, coat yourself 15 to 30 minutes before going outside. Don't skimp. Most people apply only

half the one ounce (or two tablespoons) recommended for full body coverage. So, "when they use a 30 SPF product, they are probably only getting a 15 SPF," says Mark Naylor, associate dermatology professor at the University of Oklahoma.

American Academy of Dermatology recommends that everyone use at least a 15—especially in the shade and in winter. That includes African Americans, whose rate of melanoma is one-fifteenth that of Caucasians. Those who have light skin and burn easily should use 30-plus.

Finally, don't rely on sunscreen alone. "Some rays do get through, and over time damage builds up," says Dr. Robert DeLap, an FDA office director. Wear wide-brimmed hats, ample clothing, and sunglasses. And stay indoors between 10 a.m. and 2 p.m., when the sun is strongest. Getting out of the sun still is the best protection.

Anne Terge

Preventing Skin Cancer

- ▶ Examine your skin frequently to check for new moles and changes in the size, color, shape, or texture of existing moles.
- ▶ Get annual physicals that include a skin exam.
- ▶ Limit sun exposure from 10 a.m. to 2 p.m.
- ▶ Apply sunscreen daily to exposed skin 15 to 30 minutes before going outside. Reapply frequently, especially after swimming or sweating.

DATA: AMERICAN ACADEMY OF DERMATOLOGY, FOOD & DRUG ADMINISTRATION



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A LOOK AT A HOT
SECTOR AND A
TALK WITH AN
EXPERT

BusinessWeek Investor

The Market's Sparrows Are Flying High

Microcap funds are hot—but be prepared for high risk

BY ANNE TERGESEN

After a long period of lagging behind the market, small-company stocks roared to life this spring. But unbeknownst to many investors, shares issued by the tiniest companies rallied even more explosively. As a result, microcap funds—which specialize in companies valued at \$300 million or less—rose 22% from April through June, leaving every other category of domestic equity fund in the dust, according to mutual-fund tracker Lipper. The microcaps even trounced the small-cap funds, which were up 15.6%. “Whenever we find ourselves in a small-cap market, the fantastic returns tend to be amplified as you move down in size,” says Satya Pradhuman, director of small-stock research at Merrill Lynch.

But can the good times continue to roll for small and tiny stocks? In the past month, the market has shifted back to large caps. But small stocks—or the shares of companies in the \$300 million to \$1.5 billion range—have continued to fare well. And now that investors are shrugging off the risk aversion that prompted their

flight to blue chips during the Asian financial crisis of 1997 and 1998, small-stock guinea pigs betting the smart money will continue to find traction on the market's minnows. One reason is that small-cap shares are cheaper relative to blue chips than they have been in the past.

Microcaps are even better deals. Based on the ratios of stock prices to sales, Pradhuman says microcaps are trading at 0.30 times book value, compared to 0.35 for large caps. That is 14% cheaper than the 0.35 they hit in 1997, a decade's previous low.

Microcap funds are also

Investing



ins. Investors must spend an average of receive \$1 in earnings from funds that the largest stocks, vs. \$26.27 for small d \$21.67 for those specializing in micro- d tracker Morningstar says. "The small playing catch-up, and there's a lot of to go before they get back to normal," ak Sustersic, portfolio manager at Turn- Cap Growth Fund, up 60% on an annu- sis since its inception in March, 1998. he stocks Sustersic has snapped up are shoe and apparel maker Saucony, which r 18.2 times estimated 1999 earnings, w its three-year 30% annual growth rate. investors often chase hot performance, funds might soon find themselves awash ash. Any investor interest would propel y traded stocks sharply higher.

ST. Of course, for this scenario to come mall-cap earnings must not disappoint. ailing in the second quarter, small-com- nings are expected to outstrip those of chips by 9.5 percentage points in the urther and 31 points in the fourth quarter, polled by First Call predict. Although a ly high cost of capital might restrain mpany profits, Pradhuman expects the earnings to be more predictable this in last, helping the stocks do well.

The Marks of a Good Microcap Fund

SMALL SIZE

Those with more than \$100 million in assets can have trouble trading stocks without influencing prices

LOW EXPENSES

Sales loads and expense ratios above the sector's 1.77% average can compound losses in down years

AMPLE DIVERSIFICATION

The funds are riskier when they invest a high proportion of their assets in a few holdings or sectors

DATA: MORNINGSTAR INC., MERRILL LYNCH

1998, when small-company stocks endured their worst three-year performance relative to large stocks in more than a generation. Over the past three years, microcap managers have posted an average annual return of 12.8%, vs. 10.5% for small-cap funds, Lipper says. But it's a big leap to conclude that microcap funds are better all-weather bets than their slightly larger rivals. Indeed, several one-time factors likely explain why they have gained an edge recently.

For one thing, fund companies are just starting to mine the asset class. Five years ago, only four funds used the word "micro" in their names. Today, driven by pension fund interest, 46 funds use the micro label, according to Morningstar. With money flowing



But there are no sure bets—especially in caps. "People holding microcaps should be willing to go through dramatic volatility," says Dan Coker, author of *Mastering Microcaps: Strategies, Trends, and Stock Selection* (Bloomberg Press, \$55). In a given year, microcaps post ups and downs that are 86% ore extreme than those of large stocks nd 25% greater than those of small caps, says Prudential Securities.

Tiny stocks pose other outsized dangers too. Because microcaps are thinly traded, even a small sell-off can cause a stock's price to slide precipitously.

And even if you find a great prospect, others may not notice. So the stock price may languish.

Microcap investors generally experience the worst whiplash during dry spells for small-company stocks. Interestingly, that was not the case from 1996 to

into this largely overlooked backwater, the stocks have enjoyed support even amid a small-stock dry spell, Pradhuman argues.

A second explanation of the microcap phenomenon has to do with the huge runups in In-

Microcaps' Big Returns

FUND (SYMBOL)	3-YR. RETURN*	TOP HOLDINGS
OPPENHEIMER A ENTERPRISE (OENAX)	35.0%	Corporate Executive Board, hi/fn
NUMERIC INVESTORS MICRO CAP (NIMCX)	28.9	Clarify, Xircom
WASATCH MICRO-CAP (WMICX)	25.6	Techne, ICU Medical
FREMONT U.S. MICRO CAP (FUSMX)	24.4	Emulex, Orckit Comm.
FIRSTAR MICROCAP RETAIL (FRMPX)	23.8	Alpha Ind., Ancor Comm.

* Annualized as of July 15

DATA: LIPPER ANALYTICAL SECURITIES CORP

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ternet and technology stocks. Although most Net stocks immediately skyrocket past microcap status these days, that was not the case as recently as two years ago, when fledgling Net companies helped bolster microcap fund returns, Pradhuman argues. This year, technology stocks have fueled the sector's hot performance. One favorite of the high-ranked Wasatch Micro-Cap fund is SDL, which makes semiconductor lasers that help computer networks handle high traffic volumes, says senior analyst Jim Larkins.

Another theory has to do with the unusual nature of the recent small-cap downturn. Most times, when small stocks are punished, it's because earnings or other fundamentals slump. But during much of their recent underperformance, small stocks' earnings were superior to those of the blue chips. During the Asian financial crisis that started in 1997, institutional investors flocked to the perceived safety of blue chips simply because of their greater liquidity. They indiscriminately dumped less-liquid small-cap holdings.

But microcap shareholders held on. Why? Because most are employees and other small investors intimately familiar with the company and content to remain loyal as long as fundamentals hold up, says Richard Heffert, principal director of microcap Web site, cap1000.com. If earnings had turned sour, stocks surely would have too.

Despite the microcaps' outsized volatility, history suggests that patient investors will be rewarded. Since 1926, Prudential says, microcaps have outperformed the rest of the market on an absolute basis. Their compounded annual return of 12.4% was higher than the 11.8% for small caps and the 10.7% for blue chips. But because time horizons are associated with greater volatility, microcaps fall short on a risk-adjusted basis, unless held for more than seven years, according to Coker's calculations. Whether you time the plunge now or later, examine your risk tolerance. After all, there's nothing tiny about the term risk inherent in microcaps.

THE PICKS OF A SIZZLING MICROCAP MAVEN

The swiftest newcomer to the tiny-stock scene is \$75 million BlackRock Micro-Cap Equity, up 90.5% in the year ended June 30 and 60.5% in 1999. Do-it-yourselfers will hate its 5% load, but investors paying an adviser might get it on better terms. While cautioning that the fund is inherently volatile, co-manager Thomas Callan sees plenty of opportunity. He shared his views on some of his favorite stocks recently with Senior Writer Robert Barker.

Q: What are you doing right?

A: First and foremost, it's the investment style. It's an earnings- and price-momentum investment style. We're looking for the most dynamic companies in the micro-cap range that also have positive investor sentiment.

Q: For investor sentiment, what



BlackRock Micro-Cap

TICKER SYMBOL BMEAX

ASSETS \$75 million

ANNUAL AVERAGE TOTAL RETURN 87.8%*

SALES CHARGE 5%

TOP HOLDINGS** Ancor Communications, Emulex, Macrovision

* From May, 1998, inception through June 30, 1999 ** June 30
DATA: BLACKROCK FUNDS

What's the criterion there?

A: Just a minimum of 20%.

Q: What's your favorite stock?

A: In the semiconductor space, a

criterion do you use?

A: We're looking for companies that have relative-price-strength rankings in the top 35% of the stock universe.

Q: You also screen for revenue growth.

SEARCHING FOR GROWTH
Callan wants 20% at least

company called hi/fn is particularly brilliant. They design packet processors, which are used to perform computation-intensive tasks. Given this whole bandwidth issue [and demand] to move more data with a great degree of integrity across pipelines, their semiconductors fascinate that.

Q: What else do you like?

A: Power Integrations. It makes integrated circuits [called the TinySwitch and also the TOPSwitch]. As more and more things have microprocessors in them, they need power supplies that convert AC to DC. The company has been able to miniaturize it so the power supply isn't larger than the device that you're using.

Q: Another?

A: Proxim. They make wireless networking equipment. And Motorola recently announced that they're investing in the company and [forming a strategic relationship to accelerate the deployment of wireless broadband networks.

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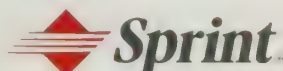


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FIDELITY'S NEW 'INVEST AND FORGET' FUND



BY ROBERT BARKER

This cheap, simple, passive-indexing fund spreads money across domestic and foreign stocks, plus U.S. bonds

Jeff Slutsky knows the "right" things to do with his portfolio—low costs, diversification, all that. Yet like most executives I meet, Slutsky, CEO of Street Fighter Marketing in Columbus, Ohio, has trouble figuring out when to do those right things. "I have to have a no-brainer because I don't have the time," he says. "I'm building a business, and I've been more focused on accumulating than investing."

In July, Slutsky hit on what he calls a "perfect" solution: He moved most of his assets, which he has in a Fidelity Investments retirement plan for himself and his employees, into its newest offering, the Four-in-One Index Fund. A "fund of funds," it spreads money across domestic and foreign stocks, plus the U.S. bond market. To Slutsky, it's "the least amount of grief at a reasonable amount of risk."

Good move? This is just the eighth of Fidelity's 283 funds to rely on "passive" indexing, which aims only to match market returns. But for many, especially beginning investors, I think Four-in-One is terrific: It's cheap, simple, and, for retirement accounts, \$500 gets you in.

Fidelity didn't invent this kind of fund. Arch-rival Vanguard Group has had one since 1994. But because Fidelity, which

prides itself on market-beating stock such as *über*-legend Peter Lynch, is the largest manager of 401(k) assets, this refreshing acknowledgement that we all do to be like Pete. As Joan Bloom, a Fidelity V-P, told me, lots of people "either don't have the time or the interest in running a portfolio."

If that sounds like you, here's how it works: 55¢ of each dollar goes into underlying Fidelity fund, Spartan Market, which tracks returns of the Standard & 500-stock index. The next 30¢ is split even between two other Fidelity funds, one for small- and mid-cap domestic stocks, the foreign stocks in industrialized countries. The last 15¢ goes into a Fidelity fund following the U.S. bond market. Jennifer Farrelly, a veteran Fidelity's S&P 500 index clone, runs the checking daily to keep its asset allocation 1% of these targets.

With no load and low expenses, the fund is close to Vanguard's LifeStrategy Growth. "They're very, very similar funds," says Sauter, Vanguard's indexing chief. "It's

splitting hairs saying one is better." Sauter is a former Fidelity sport, so I'll split the difference: Vanguard's fund is a bit cheaper and has thrived through a mix of varying stock market mixes.

Those details matter to Slutsky, though. Moving his company to another manager have been a time-consuming process. He also might have bits of each underlying fund. But the beauty of Four-in-One is that if the markets move, it's Fidelity, not Slutsky, who will

The Four-in-One Solution

To see how Fidelity's new Four-in-One Index Fund would have fared over the past year, I looked at the performance of a similarly constructed hypothetical fund. The exercise shows the Fidelity fund would have outpaced rivals.

FUND	1-YEAR TOTAL RETURN*
HYPOTHETICAL FOUR-IN-ONE INDEX	16.3%
VANGUARD LIFESTRATEGY GROWTH	15.2
AVERAGE ASSET-ALLOCATION FUND	7.2

*12 months ended June 30 DATA: MORNINGSTAR INC., BUSINESS WEEK



KEEPING TABS: Jennifer Farrelly tracks Four-in-One's allocations

balance the fund to keep its allocation on track. "All I have to do is be in this fund and contribute to it every month," Slutsky says.

Regulations keep Fidelity from saying this fund might have performed historically better. I estimated recent results (since two of the underlying funds are less than two years old, a longer-term test didn't work). They look good, though much of the return comes from a heavy weighting in stocks (table). That may be riskier than you like, especially if you need the money anytime soon.

With this index fund—which amounts to passive investing taken to the fourth power—Fidelity can earn few bragging rights. And as Fidelity's mighty Magellan Fund surges past \$100 billion, Four-in-One won't ever find Fidelity's stage. Yet for long-term investors who care as much about money, Fidelity's newest fund may be its best.

For barkeronline, go to www.businessweek.com/investor/ or to AOL, keyword: BW Do

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GETTING ON BIOTECH



G. MARCIAL

Although biotech stocks show signs of rebounding, they're still no picnic, warns Stuart Weisbrod. "I'm short a lot of them," says Weisbrod, who was a star drug analyst at Merrill Lynch and Prudential Securities before he formed Merlin BioMed Asset Management. But he still believes that the best investment plays are in the "orphan" and undiscovered biotechs.

The best catches, he says, can be snared among biotechs with market caps of about \$100 million, with promising product pipelines and ample cash. Among Weisbrod's picks: Aronex Pharmaceuticals (ARNX) and BioCryst Pharmaceuticals (BRCX).

Aronex is off everyone's radar screen and has no backing on Wall Street, notes Weisbrod. Yet he expects Aronex to introduce one product in each of the next four years, starting in 2000. Aronex has a marketing pact with Abbott Laboratories for Nyotran, a treatment for systemic fungal infections. Aronex has filed for FDA approval for Altragen, a treatment for a rare form of leukemia. Two other products are in clinical trials: Platar, a platinum compound for lung cancer, and Anamycine, an anthracycline for breast cancer.

At BioCryst, Weisbrod thinks its product for influenza is a "sleeper" that will drive earnings by 2001. Set to be in Phase III clinical tests this year, it's being co-developed with Johnson & Johnson. BioCryst is also developing products to treat cancer, immune disorders, and AIDS.

His top short is EntreMed (ENMD). The stock shot from 12 to 86 in one day, after *The New York Times* reported the company had developed anticancer (anti-angiogenesis) products that stop blood vessels from growing into tumors. The stock

has since fallen to 22. Weisbrod, who thinks it could tumble below 10, says EntreMed's product, yet to be tested in humans, is far from unique, with some 12 other angiogenesis inhibitors already in clinical trials. Most are easier to produce, use a lower dose, and are more specific than EntreMed's, he says. Among others working on such agents: Genentech, Bayer, and Boston Life Sciences.

A PHONE-GEAR STAR NAMED ANDREW

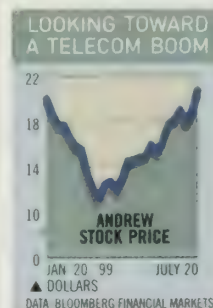
Remember onetime highflier Andrew (ANDR)? This producer of communications equipment, including coaxial cables, microwave antennas, and cellular-phone accessories, was one hot stock—soaring from 10 in early 1996 to 41 in early 1997. But disappointing earnings

caught up with the stock, and it sank as low as 10 by late 1998. Andrew has since bounced back to 20. Many are still skeptical, but Michael Jamison of Brandywine Asset Management says Andrew is a cheap way to play the wireless telecom boom that he sees coming.

"Andrew stands to benefit from the surging demand for equipment from the wireless telecom operators," he says. Jamison expects the skepticism on Wall Street to

wither once the spending on wireless infrastructure systems balloons. He figures Andrew is worth 39—six times its book. Jamison expects Andrew to earn 75¢ a share in 1999, \$1 in 2000, and \$1.20 in 2001.

Analyst Walter Piecyk of PaineWebber, who recently upgraded his rating on Andrew from neutral to attractive based on expectations of a turn in the company's business in the second half, thinks the growth in wireless infrastructure is critical to Andrew's recovery. Its U.S. business accounts for half Andrew's sales. It should benefit, says Piecyk, from the sizable increases that he expects in the 1999 capital spending plans of cellular and PCS operators.



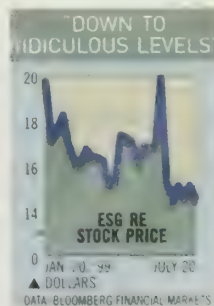
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THIS REINSURER IS RIPE FOR REASSESSMENT

Insurance is heating up—and it's where value investors will find some of their biggest winners. So argues Ed Walczak, who runs the Vontobel U.S. Value Fund, whose assets are 50% invested in insurance stocks. "Consolidation is raging in the industry," he says. He makes clear he doesn't pick stocks on the basis of their buyout potential. "We pick each stock on its merits."

One that he believes has been "driven down to ridiculous levels" is ESG Re (ESREF), which provides medical, personal accident, credit life, and disability and special risk reinsurance to insurers worldwide. The stock is down 26% so far this year, to 14 a share. At that price, Walczak figures ESG is selling way below its book value of 18, and at a mere 7.4 times estimated 2000 earnings of \$1.90 a share. So ESG, he notes, has been buying back shares.

One more thing Walczak likes about ESG: Insiders, led by Chairman John Head III and CEO Wolfgang Wand, have been buying shares on the open market. Head owns 1.8 million shares, or 13% of the stock. Wand, who purchased 5,000 shares at more than 15 each in June, owns some 2.6% of the stock. Walczak, who figures that ESG is worth north of 27 a share, has been adding to Vontobel's stake of about 6%.

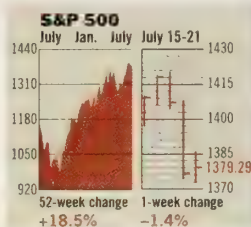


Weisbrod's Biotech Picks

52-WEEK HIGH-LOW	JUL. 20 STOCK PRICE	12-MONTH TARGET PRICE
BUY		
\$5%-1%	\$ 4%	\$30
ST 11-4%	10%	20
SHORT		
ED 35%-12	22%	10

DATA: MERLIN BIOMED ASSET MANAGEMENT, BLOOMBERG FINANCIAL MARKETS, BW

STOCKS



COMMENTARY

With all major indexes in the stratosphere, stocks suddenly developed a bad nosebleed. On July 20, the Dow Industrials drooped 1.7%, while the Standard & Poor's 500-stock index fell 2.1% and the NASDAQ swooned 3.5%—despite terrific earnings from the likes of Microsoft, General Motors, and General Electric. Still, year-to-date, the Dow is up 19.4%, the S&P 12.2%, and the NASDAQ a blistering 25.9%.

Data: Bloomberg Financial Markets

U.S. MARKETS

	July 21	Week	Year
Dow Jones Industrials	11,002.8	-1.3	19.7
NASDAQ Composite	2761.7	-2.0	39.5
NASDAQ 100	2363.6	-2.2	65.1
S&P MidCap 400	421.0	-0.7	14.3
S&P SmallCap 600	185.7	-1.3	-2.8
S&P SuperComposite 1500	290.2	-1.3	17.3

SECTORS

	July 21	Week	Year
S&P/BARRA Growth	778.4	-1.7	23.7
S&P/BARRA Value	622.5	-1.0	12.3
S&P Basic Materials	135.0	-1.7	9.5
S&P Capital Goods	1041.0	0.1	19.5
S&P Energy	859.7	-1.8	17.9
S&P Financials	142.3	-1.4	0.1
S&P REIT	83.4	-0.6	-18.5
S&P Transportation	735.3	-0.5	7.4
S&P Utilities	259.2	0.4	7.9
GSTI Internet	471.1	-6.0	159.8
Morgan Stanley Cyclical	595.1	-0.8	16.6
PSE Technology	611.2	-3.2	67.1

BEST-PERFORMING GROUPS

	Last month %	Last 12 months %
Health-Care Services	26.3	Semiconductors 83.1
Defense Electronics	12.1	Computer Systems 71.8
Specialty Chemicals	11.3	Instrumentation 65.4
Semiconductors	8.9	Broadcasting 58.2
Furnishings & Appliances	8.8	Specialty Appr. Retailers 57.7

GLOBAL MARKETS

	July 21	Week
S&P Euro Plus	1348.0	-0.9
London (FT-SE 100)	6329.8	-2.2
Frankfurt (DAX)	5414.2	-3.5
Tokyo (NIKKEI 225)	18,257.5	-0.5
Hong Kong (Hang Seng)	13,419.7	-1.1
Toronto (TSE 300)	7136.4	-1.6
Mexico City (IPC)	5857.6	0.4

FUNDAMENTALS

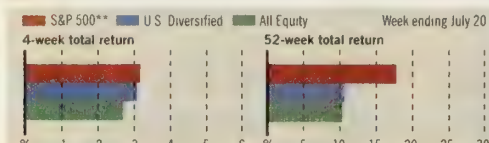
	July 20	Week ago
S&P 500 Dividend Yield	1.19%	1.17%
S&P 500 P/E Ratio (Trailing 12 mos.)	34.0	35.1
S&P 500 P/E Ratio (Next 12 mos.)*	24.6	24.9
First Call Earnings Surprise*	4.28%	3.51%

*First Call Corp.

TECHNICAL INDICATORS

	July 20	Week ago
S&P 500 200-day average	1248.1	1238.7
Stocks above 200-day average	57.0%	59.0%
Options: Put/call ratio	0.45	0.45
Insiders: Vickers Sell/buy ratio	1.50	1.44

MUTUAL FUNDS



Data: Morningstar, Inc.

**Vanguard 500 Index fund

EQUITY FUND CATEGORIES

Leaders	Four-week total return	%	Laggards	Four-week total return	%
Japan	11.4		Precious Metals	-3.5	
Small-cap Growth	7.2		Latin America	-2.6	
Technology	6.6		Real Estate	-2.3	
Diversified Pacific/Asia	5.3		Pacific/Asia ex-Japan	0.3	
Health	5.2		Financial	0.7	
Leaders	52-week total return	%	Laggards	52-week total return	%
Pacific/Asia ex-Japan	62.5		Precious Metals	-16.8	
Technology	60.9		Latin America	-15.3	
Japan	56.0		Real Estate	-9.5	
Diversified Pacific/Asia	48.8		Europe	-8.5	
Communications	41.0		Small-cap Value	-5.2	

INTEREST RATES

KEY RATES	July 21	Week ago	Year ago
MONEY MARKET FUNDS	4.58%	4.55%	5.10%
90-DAY TREASURY BILLS	4.55	4.72	5.07
1-YEAR TREASURY BILLS	4.92	5.01	5.37
10-YEAR TREASURY NOTES	5.65	5.74	5.46
30-YEAR TREASURY BONDS	5.90	5.92	5.68
30-YEAR FIXED MORTGAGE†	7.62	7.60	7.04

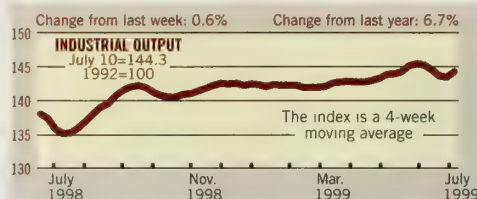
BLOOMBERG MUNI YIELD EQUIVA

Taxable equivalent yields on AAA-rated, tax-municipal bonds, assuming a 31% federal tax rate.

10-yr. bond 30	
GENERAL OBLIGATIONS	4.69%
TAXABLE EQUIVALENT	6.80
INSURED REVENUE BONDS	4.84
TAXABLE EQUIVALENT	7.01

†BancQuote, Inc.

BW PRODUCTION INDEX



Information on each of the index components is at www.businessweek.com. BW production index Copyright 1999 by The McGraw-Hill Companies

The production index rebounded week ended July 10. The unadjusted index soared 1.5%, to 146.9, from 144.7. Personal adjustment, electric power was the highest it has been since last September as record-breaking temperatures were across the country. Output of autos, coal, and rail-freight traffic was high. Truck and lumber production dropped part because of the July 4 holiday.

THE WEEK AHEAD

EXISTING HOME SALES Monday, July 26, 10 a.m. EDT ▶ Existing houses probably sold at an annual rate of 5.05 million in June, little changed from the 5.04 million sold in May, says the median forecast of economists polled by Standard & Poor's MMS, one of The McGraw-Hill Companies.

CONSUMER CONFIDENCE Tuesday, July 27, 10 a.m. EDT ▶ The Conference Board's confidence index likely fell to 138 in July, down from 138.4 in June.

DURABLE GOODS ORDERS Wednesday, July 28, 8:30 a.m. EDT ▶ New orders booked by durable goods manufacturers probably

increased by 0.6% in June, following a large 1.4% advance in May.

REAL GROSS DOMESTIC PRODUCT Thursday, July 29, 8:30 a.m. EDT ▶ The S&P MMS median forecast projects that real GDP grew at an annual rate of 3.6% in the second quarter, after jumping 4.3% in the first quarter.

EMPLOYMENT COST INDEX Thursday, July 29, 8:30 a.m. EDT ▶ Labor costs likely increased 0.8% in the second quarter. In the first quarter, compensation rose 0.4%.

PERSONAL INCOME Friday, July 30, 8:30 a.m. EDT ▶ Personal income in June

probably rose 0.5%, on top of a 0.4% gain in May. Consumer spending likely increased 0.4% in June, after rising 0.6% in May.

NEW HOME SALES Friday, July 30, 10 a.m. EDT ▶ New single-family homes probably sold at a 900,000 annual rate in June, up from 888,000 in May says the S&P forecast.

BusinessWeek ONLINE

For more investment data and the components of the production index, visit www.businessweek.com.

Index to Companies

gives the starting page for a story or a significant reference to a company. Companies are indexed under their own names. Listed only in tables are not included.

res (ABT) 109	Credit Suisse First Boston 32
ra 54	Crowell Wheedon 4
reare (AET) 36	D
	Daewoo 52
	DaimlerChrysler Aerospace 54
	Dataquest 32
	Deloitte Consulting 48
	Delphi Automotive Systems (DPH) 62
	Deutsche Telekom (DT) 86
AZN) 112	DLJdirect (DLJ) 33
Manufacturing	Donaldson Lufkin & Jenrette (DLJ) 33
	DuPont (DD) 33
AOL) 48, 66, 72	E
30, 86	Eastman Kodak (EK) 66
ting 72	Edwards (A.G.) & Sons (AGE) 72
III	Electronic Data Systems (EDS) 33, 76
(AAPL) 32, 112	Energy 4
euticals	EntreMed (ENMD) 109
J) 16	ESG Re (ESREF) 109
45, 76, 88	Eurostar 98
ng (TWX) 95	Excite@Home (ATHM) 16, 72
	F
	Fibrowatt 4
	Fidelity Investments 106
	First Call 102
SC) 34	First Chicago WBD 72
EL) 76, 86, 88	Fleetwood Enterprises (FLE) 16
86	Fleming Companies (FLM) 45
	Ford (F) 62
aceuticals	Forecaster Alexander 34
	France Telecom (FTE) 86
o-Cap Equity Fund	Fresh Del Monte Produce (FDP) 59
	Frontier (FRO) 88
	Fuji Photo Film (FUJIF) 66
	G
ances (BLSI) 109	Genentech (DNA) 74, 109
m 16	General Electric (GE) 4, 33
set	General Motors (GM) 25, 28, 30, 33, 62, 89
IG	Gillette (G) 31
ce 54	Global Crossing (GBLX) 86, 88
(BAB) 98	Goldman Sachs (GS) 50, 70
Airways 98	Gomez Advisors 72
	H
hology Partners	Harvard Pilgrim Health Care 36
	Healthcon (HLTH) 89
	Hewlett-Packard (HWP) 76
	Hi/In (HIFN) 104
ergy 4	Honda (HMC) 50
T) 30	HotBot 16
D) 45	Hughes Electronics (GMH) 33
ay & Christmas 31	Hurwitz Group 76
4	HyperLock Technologies 95
HINA) 48	I
mer 32	IBM (IBM) 4, 30, 76
I (CSN) 45	Intel (INTC) 30, 66
J) 30	Intermedia Communications (ICIX) 86
ts Bank 74	International Data 32, 48, 66
A) 24	Internet Travel Network 76
) 76	IXC Communications (IXC) 45, 86
egies 32	

Jackson Lewis, Schmitz & Krupman 4	R
Johnson & Johnson (JNJ) 45, 109	Razafish 112
Jupiter Communications 89	Rio (RIMD) 16
K	Royal Caribbean Cruises (RCL) 45
Kawasaki Steel 50	RPM (RPM) 28
Kmart (KM) 45	S
Korean Aircraft Industries 54	St. John Knits International (SIKU) 73
L	Saks (SKS) 73
Lehman Brothers (LEH) 34	Salomon Smith Barney (C) 34, 45
Lipper Analytical Securities 102	Saucony (SCNYA) 102
Lockheed Martin (LMT) 54	SBC Communications (SBC) 86, 88
Lucent Technologies (LU) 76	Schwab (Charles) (SCH) 4, 112
Lufthansa (DLGY) 98	SDL (SDLI) 102
M	Seattle FilmWorks (FOTO) 66
Manpower (MAN) 31	Sharon Steel 89
Mazda 50	Sharper Image (SHRP) 16
McGraw-Hill (MHP) 28, 110	Showa Ota Ernst & Young International 50
MCI WorldCom (WCOM) 45, 86	Sina.com 48
McKinsey 76	Sony (SNE) 50, 66
Medco Containment Services 89	Sprint (FON) 86
MediaOne Group (T) 86	Standard & Poor's (MHP) 31, 59, 106
Medical Manager (MMGR) 89	Starbucks (SBUX) 4
Merck (MRK) 60, 89	State Street Research 34
Merlin BioMed Asset Management 109	Street Fighter Marketing 106
Merrill Lynch (MER) 34, 45, 50, 70, 102, 109	Sun Microsystems (SUNW) 76
Microsoft (MSFT) 30, 33, 45	Supervalu (SVU) 45
Mitsubishi Heavy Industries 54	Synetic (SNTC) 89
Mobil (MOB) 4	T
Morgan (J.P.) (JPM) 88	Tele-Communications (T) 86
Morgan Stanley Dean Witter (MWD) 24	Texas Instruments (TXN) 30
Morningstar 102	Thalys 98
Motorola (MOT) 66	3Com (COMS) 32
MP3.com (MPPP) 45	Ticketmaster Online-CitySearch (TMCS) 45
N	Time Warner (TWX) 30
National Pharmacies 89	Toshiba 50
NEC (NIPNY) 50	Toyota (TOYOY) 50
Neiman Marcus (NMG) 73	Trimeris (TRMS) 104
Netbig.com 48	T. Rowe Price (TROW) 112
Netease 48	U
Netscape Communications (AOL) 76	Union Pacific Resources (UPR) 45
Nextel Communications (NXTL) 28	United Parcel Service 45
Nike (NKE) 74	U.S. Bancorp Piper Jaffray (USB) 73
Nissan (NSANY) 50	U.S. West (USW) 86, 88
Nissio Iwai 50	V
Northeast Securities 70	Vanguard Group 106
Novellus Systems (NVLS) 45	Vestar Capital Partners 73
Nynex (BEL) 86	Viacom (VIA.B) 34
O	Visteon Automotive Systems 62
Oracle (ORCL) 98	Vodafone AirTouch 76
P	Vontobel U.S. Value Fund (VUSVX) 109
Pacific Telesis (PAC) 86	W
Packard Bell NEC 76	Wal-Mart (WMT) 28, 45, 112
PaineWebber (PWJ) 109	Walt Disney (DIS) 33
Palo Alto Products 112	Warburg Dillon Read 50
Pharmacia & Upjohn (PNU) 60	Wasatch Micro-Cap Fund (WMICX) 102
PhotoLoft.com (LOFT) 66	WebMD 89
PictureWorks Technology 66	Y, Z
Power Integrations (POWI) 104	Yahoo! (YHOO) 16, 48, 72, 76
Procter & Gamble (PG) 31	Yankee Group Research 86
Prudential Securities 28, 102, 109	Zeus Securities 70
Q	Zhoadala Internet 48
Quantas Airways 4	Ziff-Davis (ZD) 33
Qwest Communications (QWST) 86, 88	

This Week, Online

Business Week presents frequent live conferences and chats on America Online—your opportunity to ask questions about timely topics.

Tuesday

Hot to trot in the small-cap or IPO markets? Get your directions from analyst Mark Basham of Standard & Poor's in this chat presented jointly with S&P Personal Wealth, the financial planning tool.

July 27

4:30 p.m. EDT

Thursday

Gomez Advisors keeps a scorecard on online brokers and bankers. So Dan Burke, senior brokerage analyst for Gomez, is the man to talk to if you want to log on to those areas. Check the Gomez ratings with him first.

July 29

9 p.m. EDT

AOL keyword: BW Talk

Transcripts of all conferences are available for downloading from the BW Online area on AOL soon after each event.

For a free trial diskette including 50 free hours on AOL, call 1-800-641-4848 and mention Business Week.



LET'S GET REAL ABOUT CUTTING TAXES

It's time for a little sanity—and honesty—in the tax-cut debate swirling around Washington. Both Republican and Democratic politicians are drooling over an extra \$1 trillion in the budget surplus that they want to carve up and send back to their various constituencies. Tax cuts are great in principal and the right ones promote economic growth. But the feeding frenzy now going on in Congress and on the Hill is over a surplus that exists more in political than fiscal reality.

Here's the math. Congress has agreed to put very strict caps on spending to get the budget under control. To get to the magic \$1 trillion number, Congress has to abide by budget rules that actually cut discretionary spending through 2002 for such things as national parks, the FBI, trade subsidies, and education. Then it must freeze spending entirely through 2009. This is a scenario that is not likely to see the light of day.

If Congress were merely to keep real spending constant, Federal outlays would rise by \$600 billion over the next 10 years. That would leave a surplus of about \$400 billion, not \$1 trillion. That brings us back to reality. But in this calculus, not a cent has yet been spent on the Medicare solvency problem or reducing the Federal debt.

Nowhere in the tax-cut free-for-all has monetary policy been considered either. With the economy running flat out, any major tax cut now will be inflationary and put pressure on the Federal Reserve to raise interest rates. Not a good idea.

The nation has finally gotten rid of its perennial budget deficit and the borrow-and-spend policies that went with it. Before we launch massive tax cuts, perhaps we ought to make sure that there really will be an extra \$1 trillion surplus over the next 10 years. It sounds like a phony number based on some highly dubious assumptions.

PROFIT HISTORY IN THE MAKING

Boffo U.S. corporate profits for the second quarter are to be savored. Double-digit returns, far ahead of revenue growth, are good anytime. To get that kind of performance 101 months into a business expansion is unusual. To see such profits when companies lack any pricing power is quite exceptional. No one really knows how long the good times will roll on, but for the moment, the U.S. is in the grip of a virtuous cycle. High corporate profits provide the cash to invest in capital, which boosts productivity, curbs inflation, promotes growth, boosts profits....

So it's important to remember how we got there. Of course, the Federal Reserve and the bond vigilantes have done their part in tempering a red-hot economy. CEOs have also been smart enough to use corporate cash to increase ef-

ficiency and capacity. Even with the economy growing nearly 4% annually, capacity utilization remains below a decade ago it would have been over 90%, pushing higher. The Internet is also turning out to be a great ally by distributing price information, removing costs from middlemen, and often lowering prices. T. Rowe Price Inc. lowers brokerage commissions. E-Loan offers cut-rate mortgage financing. Wal-Mart Stores Inc. goes Net selling books and soon everything else.

Without pricing power, companies all over the world have to make their profits the hard way—by cutting costs and selling in volume. In Britain, the euro zone, Korea, and elsewhere, corporate profits are on the rise as inflation falls. The economy outside the U.S. is growing again. Inflation is down.

This could change if soaring U.S. equity or housing prices spill over into the rest of the economy. Or Asia returns to rapid growth. Or there is another debt crisis. But for the moment, profits are up, inflation is down, and a virtuous cycle is making us all richer.

GOOD DESIGN: APPLE GETS THE PICTURE

Apple Computer Inc.'s new iBook laptop has the makings of a hot product. And if it lives up to the success of its predecessor, the iMac, it will soon be boosting Apple's product market share. Steven P. Jobs, of course, deserves credit for giving this once-great icon of a company. But rebooting the company have been impossible without Apple's product designers. The successful marriage of technology and design is one of the key ingredients to business success. In fact, the fast-paced technology moves, the greater the need for design that corresponds to the needs and desires of ordinary people.

New maxims rule the world of product development: Things that can be digital will be digital. All things that connect to the Internet will connect. So thanks to digitization, the Net, and cheap flat-panel displays, a wave of productivity is pouring forth into the economy. Everything from photocopiers to refrigerators is becoming interactive, and the design interaction between product and consumer is critical.

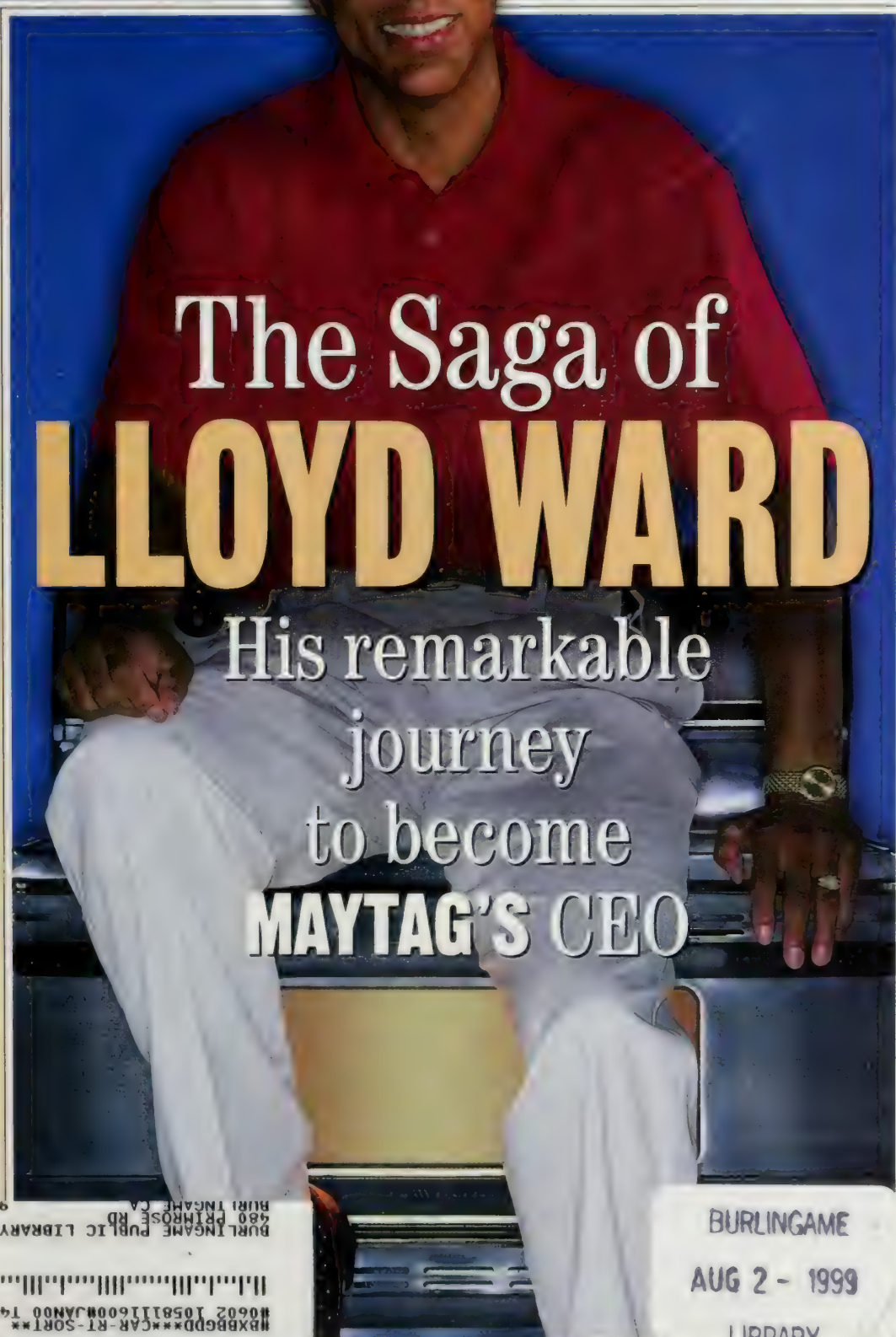
Even one design company can make an enormous difference. Palo Alto Products International designed the Palm Pilot, the latest Palm VII, the Rocket eBook, and the iToaster. The Palm VII connects Palm users to the Net. The eBook is an electronic book. And the iToaster is a kitchen appliance that, again, connects people easily to the Internet. Another example is New York-based Razorfish's redesign of Charles Schwab's Web site. Within months, Schwab's Web site was one of the great successes in E-commerce.

In a period of fast change, good product design can bridge the gap between the uncertainties of new technology and the practical and emotional realities of people. Good design can't guarantee commercial success, but good design improves the odds. Smart companies such as Apple know this.

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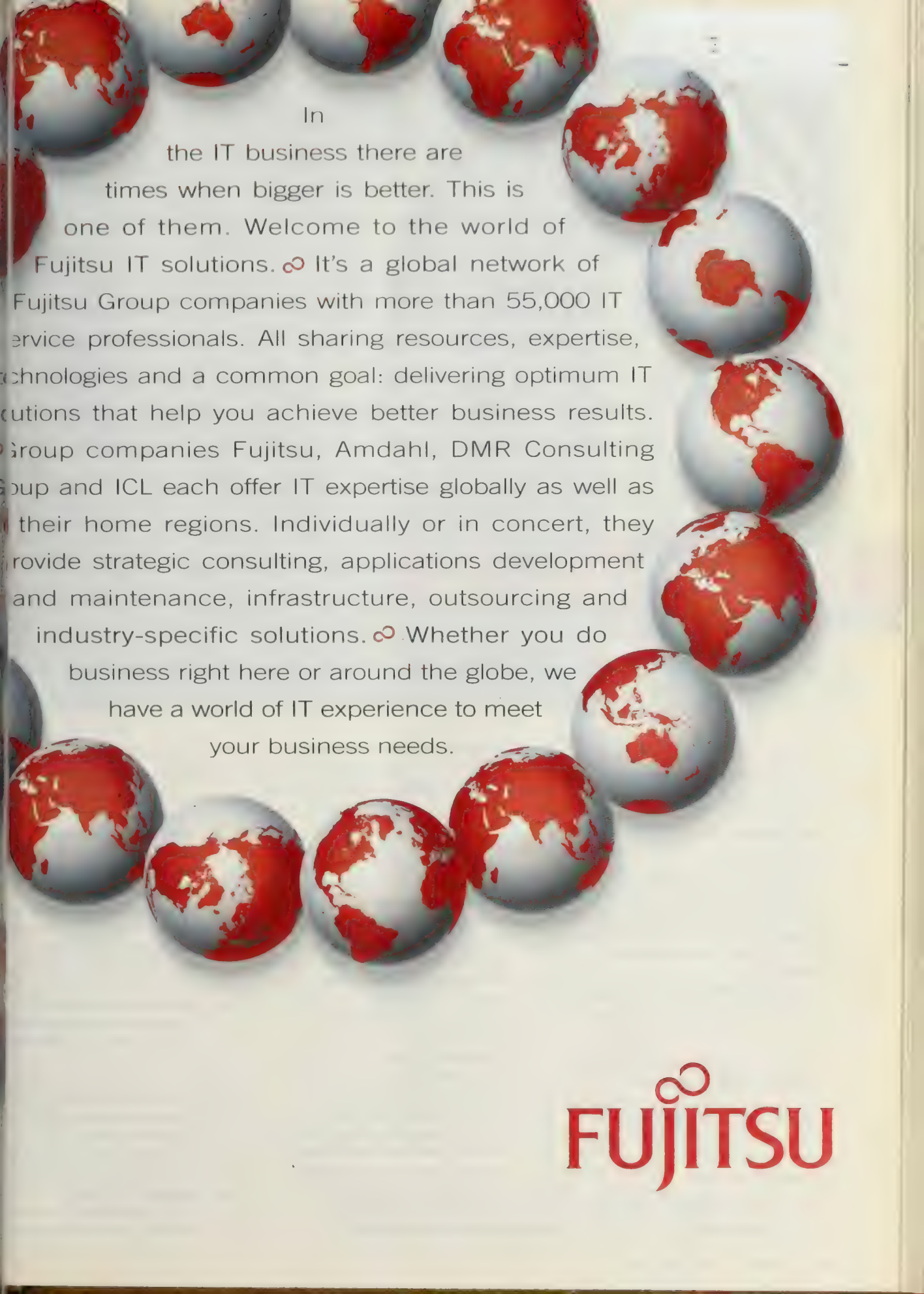
The Saga of **LLOYD WARD** His remarkable journey to become **MAYTAG'S CEO**

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SPEEDY TRADING

Markets get faster—
can the regulators
keep up? page 84



COVER STORY

THE SAGA OF LLOYD WARD

A close-knit family,
unwavering goals,
and strong leadership
skills sped his journey
to Maytag's corner
office page 58

BusinessWeek

AUGUST 9, 1999

Cover Story

58 THE SAGA OF LLOYD WARD

When he assumes the top job at Maytag on Aug. 12, Ward, at 50, will have made a longer journey than any other CEO in America. Many have escaped poverty, and a few other African Americans have overcome the racism that still plagues the workplace. But Ward has defeated both. Before coming to Maytag in 1995, he climbed the corporate ladder at P&G and PepsiCo

70 DON'T MESS WITH THIS MAYTAG MAN

Ward, a black-belt karate enthusiast, teaches our intrepid reporter a lesson

News: Analysis & Commentary

28 ASIA'S SHAKY RECOVERY

The region's stock markets are booming again, and foreign investors are stampeding back. But is this really the Great Turnaround?

31 COMMENTARY: CHINA

Although it's an option of last resort, Beijing could devalue its currency in the not-too-distant future

32 THE DEBT-CUTTING BANDWAGON

Reducing federal IOUs appeals to pols

33 PORTAL COMBAT: MICROSOFT VS. AOL

The online giants slug it out in the battle for Internet dominance

34 HOT TIMES FOR E-BIZ EXECS

With Net businesses bursting forth, there's a shortage of help—and ever-inflating pay packages being proffered

35 COMMENTARY: WOMEN WORKERS

Do the changes wrought by the New Economy mean parity is finally in sight?

36 SMOKE AND MIRRORS AND MILEAGE

Detroit may have been playing fast and loose with its fuel-efficiency numbers, but it's running out of ruses

37 A VW PICKUP TRUCK?

Volkswagen is ready to push the envelope to increase U.S. profits

40 INTERACTIVE TV'S NEW HOPE

A device that personalizes programming has CBS, Disney, and others excited

43 CLOSING IN ON AN HIV VACCINE?

Companies are testing an approach that may nip infection in the bud

44 IN BUSINESS THIS WEEK

International Business

46 BRITAIN: CABLE TV

NTL's Barclay Knapp may soon conquer a new frontier on the

47 COMMENTARY: FRANCE

Why companies should disclose compensation

48 EUROPE: THE ECONOMY

EC economies are blossoming and more growth is projected

50 JAPAN: THE WORKFORCE

Older workers who expected lifetime employment are in for a rude

53 INTERNATIONAL OUTLOOK

China growls—and suddenly, U.S. ships back in local waters

Economic Analysis

20 ECONOMIC VIEWPOINT

Tyson: How to make HMOs better

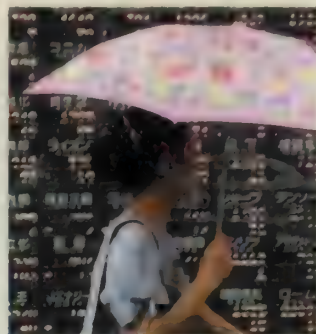
24 ECONOMIC TRENDS

The wealth effect, the minimum grandparenthood, investor reactions

25 BUSINESS OUTLOOK

Greenspan is watching the labor markets for signs of overheating

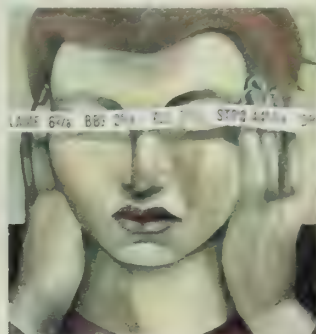
ADVICE?
V's Inside
reet fared



JET-SET RITES
GE finds a mate for a
costly engine page 72

JITTERS IN ASIA
Glitches in the new
turnaround page 28

**ANY NUMBER
CAN PLAY**
eToys is about to
have a lot of
company page 86



CYBER UNIVERSITY
Hallowed schools and
for-profit upstarts are
rushing online page 90

CABLE KING
Barclay Knapp is
beating Europe at its
own game page 46

STREET SCANDAL
What did the NYSE
know about illegal
trades? page 76

ernment

INGTON OUTLOOK

on's plan to smoke out the GOP
a lawsuit against Big Tobacco

Marketing

WILD ABOUT HARRY POTTER

love the book series, which is
ing an offbeat marketing campaign

Corporation

GE NAILED THAT BOEING ORDER

ng a deal to supply engines to the
777X took a hefty dowry

MAN WHO WOULD BE WELCH

McNerney: GE's next CEO?

ance

NDAL AT THE BIG BOARD

nsider says floor brokers traded
ully—and the NYSE knew it

DE WALL STREET: A SCORECARD

ks mentioned in the column initially
ed the indexes, but lagged later on

MENTARY: MARKETS

luq/NYSE rivalry is healthy

Information Technology

18 TECHNOLOGY & YOU

Europe's state-of-the-art standard
makes digital communications a snap

86 ONLINE TOY SALES: IT'S NO GAME

Pioneer eToys discovered a hot market.
Now everyone wants in

Science & Technology

87 BATTLE OF THE BATTERIES

Whose cheaper, lighter version will land
under tomorrow's car hood?

89 DEVELOPMENTS TO WATCH

Hep B vaccine in spuds, space robots,
man-made cancer cells, Net pricing plan

Social Issues

90 WIRING THE IVORY TOWER

Online colleges are taking off—but will
academic standards go down?

92 CYBER ED: GIVE IT AN A-

Our correspondent takes an online
course from UCLA

BusinessWeek Investor

96 THE BIGGEST USED-CAR LOT OF ALL

Tire-kicking on the Net offers pluses
you won't find at a real live dealer

98 TEST-DRIVING DEALERSHIP STOCKS

Online auto lots are going public

100 TIME TO SWAP 'N' SAVE?

Exchange funds let you trade easily

102 WATCH THOSE JOB NUMBERS CHANGE

Employment figures can jolt markets

104 THE BARKER PORTFOLIO

Options: To exercise or not to exercise?

109 GENE MARCIAL: INSIDE WALL STREET

Features

4 UP FRONT

10 READERS REPORT

11 CORRECTIONS & CLARIFICATIONS

14 BOOKS

16 BUSINESS WEEK BEST-SELLER LIST

110 FIGURES OF THE WEEK

111 INDEX TO COMPANIES

112 EDITORIALS

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Up Front

EDITED BY
ROBERT McNATT



CHAMBERS

I-WAY PATROL

CISCO'S WHITE PAPER GETS RIPPED

CONSUMER ADVOCATES ARE worried that the company that provides much of the technological backbone of the Internet, Cisco Systems, may give big cable Internet providers like AT&T the know-how to boost their prospects while hurting the competition.

On July 29, the Center for Media Education (CME), Consumers Union, the Consumer Federation, and the Media Access Project alerted federal regulators to a company white paper, "Controlling Your Networks." The paper describes technology that could let cable companies limit the speed at which their cable-modem subscribers get rivals' content while offering their own at full speed: "You could promote and offer your own or partner's services with full-speed features to encourage adoption of your services."

Such strategies could squeeze competition and raise prices. "This is the architecture of discrimination being implanted in the Internet of the 21st century," says CME's Jeffrey Chester. Legally, Cisco can offer any technology to cable operators, who like to control traffic flow to ensure good service. Under CEO John Chambers, Cisco says its technology is already widespread and available to all.

Catherine Yang

LITIGATION NATION

HOW 'FUN' BECAME THE F-WORD

CAN ANYONE PATENT FUN? Carnival Cruise Lines is trying. The Miami-based company has sued a local rival, SeaEscape Cruises, for using the slogan "SeaEscape to a Ship Full of Fun" in its ads. It is arguing that when SeaEscape uses the words "ship" and "fun" in the same sentence, it is infringing on its trademarked Fun Ships campaign.

It's an old stratagem for Carnival. Last year, it sued the Florida Fun Train, which

TALK SHOW "I would just like to say one thing: If you get a second chance in life for something, go all the way."

—Lance Armstrong, Tour de France winner and cancer survivor



ADS: Now a federal case

ran a Miami-Orlando route, over the same issue. The companies reached an out-of-court settlement, but the train company soon went broke. SeaEscape says Carnival now wants to intimidate it into submission.

SeaEscape is fighting. With only one ship, runs daily gambling on the line has been won to attract families. summer, it tweaked the larger Carnival—also smarting after acknowledging 108 alleged sexual assaults on its ships from 1993 to 1997 with radio jingles bleeped every mention of "f-word." Listeners lyrics such as "Come on SeaEscape to a ship full of BLEEP." The ads urged Carnival to "lighten up a bit." Carnival declined to comment. A hearing is set for Aug. 27 in Miami federal court.

Jonathan

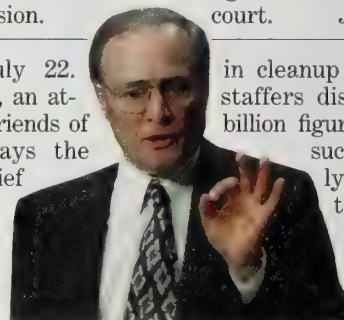
TAXING MATTERS

WHY THE GREENS ARE SEEING RED

ANGRY GREENS ARE ALL SET to fight a Republican bill they say will gut environmental protection. But GOP hard-liners aren't attacking environmental laws head on, say environmentalists. They aim to achieve their goal differently: with tax legislation.

Example A? The \$792 billion tax-cut bill introduced by Representative Bill Archer (R-Tex.) and passed by the

House on July 22. Brian Dunkiel, an attorney with Friends of the Earth, says the bill's "Tax Relief for Distressed ... Industries" section should be renamed "Relief for Industries that Distress the Environment." His group says the bill has more than \$100 billion worth of dubious changes, such as \$7 billion in tax breaks over 10 years to the energy industry and cuts



ARCHER: Verdant tax breaks

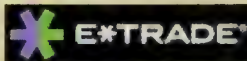
in cleanup funds. A staffers dispute the billion figure and point to such environmental provisions as tax breaks for reforestation. Dunkiel says other groups want to moderate the tax breaks and such provisions as renewable energy tax credits when the bill goes to conference. They're seeking a legislative veto.

John C.

THE LIST THE LINE ON ONLINE BROKERS

This summer, Gomez Advisors rated 53 online brokers on criteria such as ease of use, on-site resources, and cost. Overall scores ranked from 0 to a top score of 10. The brokers were also rated on how they fit with four investor types: serious, who look for high-quality

stock info; hyperactive, who tend to trade frequently; life-goal planner, who are risk-averse; and one-stop shopper who meet many financial needs in one place.



TOP FIVE

FIRM	OVERALL SCORE	INVESTOR TYPE THAT THE FIRM IS ESPECIALLY GOOD FOR
1. E*TRADE	7.52	SERIOUS, LIFE-GOAL PLANNER
2. NDB	7.35	SERIOUS, LIFE-GOAL PLANNER, HYPERACTIVE TRADER
3. SCHWAB	7.31	SERIOUS, LIFE-GOAL PLANNER, ONE-STOP SHOPPER
4. DLJDIRECT	7.19	SERIOUS, LIFE-GOAL PLANNER
5. DISCOVER BROKERAGE	7.04	SERIOUS, LIFE-GOAL PLANNER

BOTTOM FIVE

FIRM	OVERALL SCORE
49. BROWN & CO.	4.0
50. SUNLOGIC	3.0
51. NORWEST	3.0
52. VANGUARD	2.0
53. T. ROWE PRICE	1.0

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Up Front



PRODUCT PEEK

NOW IT'S HARDER TO FAKE YOUR DEATH

IT SEEMS PEOPLE NEVER TIRE of trying to scam insurers. There's the chiropractor who used multiple names and tax numbers to claim money for 57 procedures—all performed in one day. Or the teens who worked convenience stores, one spilling cleaning fluid while the other "slipped" and sued. Frauds, simple and otherwise, cost \$85 billion last

year, according to Insurance Services Office, an industry data group.

But starting in September, insurers will get a sophisticated new weapon against fraud—software dubbed NetMap for Claims. Developed by ISO and Alta Analytics, it can quickly scan 135 million insurance claims for suspicious similarities in phone numbers, names, Social Security numbers, and other data. NetMap will cost up to \$500,000. But an ISO spokesman says it is far more comprehensive than current software: "It has been comparatively easy to cheat the system if you can't cross-check on this scale."

Still, no software can substitute for common sense. One clever California inmate squeezed cash out of candy makers for allegedly putting tainted products in a vending machine. For months, nobody noticed he was writing from prison. *Diane Brady*



LINING UP: A mini-frenzy

as much as \$40. Folks who are paying \$2.32 for a Hello Kitty with a minimum food purchase of

\$1.95 wouldn't mind seeing a big return on their investment. In fact, similar Hello Kittys go for \$15 in local department stores. McDonald's says the promotion has boosted sales 10% at its 158 outlets—quite a feat in recession-ravaged Hong Kong, where the economy shrank by 5% last year.

The frenzy over Hello Kitty has spread from Japan, where the toy was designed for children some 25 years ago. In the U.S., its appeal is still mostly to the young. But in Hong Kong, enthusiasm among adults has led to everything from a Hello Kitty café to a Hello Kitty credit card. *Michael Cheung*

TOY STORY

HONG KONG'S KITTY CRAZE

IT'S MONDAY MORNING, AND close to 1,000 people are waiting to get into a McDonald's in an upscale Hong Kong mall. The hook: a chance to buy Hello Kitty, a stuffed feline toy by Sanrio that has sent the company's revenues past the \$1 billion mark.

It's the latest crowd-pleasing promotion by the burger giant in the former British colony. Last year, Mickey D's sparked a speculative fever with the sale of cheap, limited-edition plastic Snoopy toys, which briefly resold for

DRAWN & QUARTERED



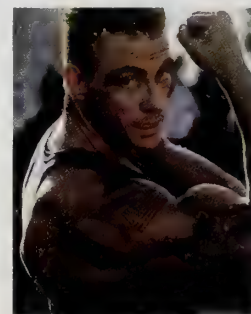
I-WAY PATROL

MINING A SITE'S MISTAKEN IDENTITY

SOME CYBERSQUATTERS MAKE a buck snapping up choice Web site names and reselling them. Well, one company that became an inadvertent squatter now aims to find gold on its little patch of Internet.

Way back in 1985, Jeff Slutsky named his Columbus (Ohio) sales-seminar business Street Fighter Marketing Inc. He trademarked the name and in 1997 erected a Web site: www.streetfighter.com. Soon, it was getting 80,000 hits a month. Why the huge interest in motivational seminars,

he wondered? Turns out hits were from kids watching games and toys based on action hero Colonel William Guile, played by Jean-Claude Van Damme in the 1994 *Street Fighter*. "They're calling our office, asking 'What about the new



VAN DAMME: Hits

Fighter game," says Slutsky.

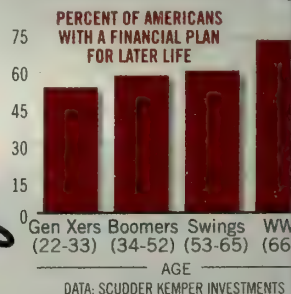
He hopes to get game and toy distributors to buy their wares from his site—for a price, of course. Capcom Entertainment, maker of *Street Fighter* games, has bought in.

But Slutsky's site was not given up. "Once you've captured the customer, you can sell them anything," he says. Spoken like a true named Guile. *Robert B.*

THE BIG PICTURE

RETIREMENT PLANNING STARTS EARLY

Most young Americans are already planning for retirement. With little faith in Social Security, 37% of Gen Xers think they'll likely have at least \$1 million in retirement saving



FOOTNOTES Americans who want an overhaul of the health-care system, 17%; want major changes, 40%; minor changes, 33%

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Charles Schwab on investing

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compensated."



"I'm a working mother," says Susan, "and I want to plan for a secure future. So it's important that I make the right investments now."

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"I'd heard good things about them. When I was ready to invest, I visited a Schwab branch office, and they were very helpful. They even helped me invest my five-year-old son Spencer's money for him."

What keeps you at Schwab?

"Their Investment Specialists aren't in it for the commission. I want as much money as possible to go into the Susan-and-Spencer pot, not someone else's."

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need without sales pressure. "They truly want to help people," as Susan says.

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Any closing thoughts?

"I plan on investing with Schwab for the rest of my life," says Susan. "Spencer has a great deal of life ahead. I'm his mother, and I want the best for him."

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RETIREEES COULD GET SHORTCHANGED

In "Building the best retirement plan" (Cover Story, July 19), you forgot to delve into the conversion of defined-benefit plans to cash-balance plans. Take Motorola Inc.'s recent announcement—that all employees will have a choice as to which plan they want. This is eminently fair.

Then look at IBM—where only those within five years of their retirement eligibility are offered a choice between the "old" plan and the "new" plan. The result? A big potential reduction in benefits, amounting to hundreds of thousands of dollars for many employees and even more for higher-level employees. In addition, retiree medical coverage is all but eliminated under the "new" plan. What will these newly poor retirees do? They will come knocking on government's door for financial and medical assistance.

Bruce Broadley
West Nyack, N.Y.

THE HOUSE OF LABOR NEEDS SOME CLEANING

In "All's not fair in labor wars" (News: Analysis & Commentary, July 19), Aaron Bernstein suggests that unions win only half the elections in private companies because of anti-union tactics and lack of an opportunity to join one.

Could it be that workers are instead fed up with the violence, intimidation, forced union dues that disappear into the air, and simple counterproductivity that in the final analysis threaten their livelihoods?

James R. Reynolds
President
Cast Tools Inc.
Racine, Wis.

While I believe that nonunion employees are worse off than union members, the house of labor is still much in need of improvement. Continuing labor scandals, such as those at New York

City's AFSCME DC-37 [American Federation of State, County, and Municipal Employees] and my local, SEIU [Service Employees International Union], are a union buster's dream true. Laborerats, with their penth junkets, executive board secrets, lack of financial accountability, make easy targets.

Many companies have captive union meetings of their employees union-avoidance specialists that hire know how to spin this fact to advantage. What is ironic is nonunion employees can openly demand union corruption and are able to leverage great deal, real or imagined, at meetings.

Indictments, convictions, and active coverage of labor in the media never officially discussed with members of the rank and file. Union meetings, publications, and Web sites usually more corruption or give sanitized versions of events. These actions can alienate loyal union members, all potential organizers.

The lack of rank-and-file democracy is the real organizing problem. Unions must allow members to debate and vote on policy issues. An educated, informed and involved union member is the best organizer.

Paul P.
Shop St.
Local, 32B-32J
New

YOU NEVER KNOW WHEN YOU'LL NEED LONG-TERM CARE

My clients' biggest objection to long-term-care (LTC) insurance is that "I won't need it"—even though the odds are about 1 in 3 that an American ("Someone to watch over you," Business Week Investor, July 19).

There is now at least one company that offers a single-premium life insurance with a LTC rider giving a resident pool twice the death benefit in case a person needs LTC. As the money in the death benefit decreases. If never withdrawn, there is still all the

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LECTIONS & CLARIFICATIONS

nnovations" item about microwav-
etals (Developments to Watch, July
as misattributed. The research is un-
ay at Pennsylvania State University.

hy it's not a blockbuster IPO" News:
sis & Commentary, Aug. 2), the esti-
l valuation of \$2.8 billion to \$3.2 bil-
r Blockbuster Inc. represented equi-
ue only. Total valuation, including
is \$4.4 billion to \$4.8 billion, vs. the
llion to \$6 billion Viacom Inc. had
ally sought. Also, Viacom's \$8.4 bil-
icquisition of Blockbuster included
smaller assets that are not included
Blockbuster IPO.

ag for pills won't pay for itself" (News:
sis & Commentary, July 19) should
said that the suggested premium
for drug coverage in President Clin-
Medicare proposal would start at \$24
month, not per year.

re, which will go income-tax-free to
eneficiaries.

ny people believe that Medicare
ke care of their LTC needs. In fact,
bout 8% of those costs are borne
edicare: Most financial support
from the individual or family.

uggest to all my clients that they
ome form of LTC. I don't want to
ed by someone who at age 49 had
ke or car accident and is without
age because they thought that
should delay buying a policy until
5.

Robert Berend

Registered investment adviser
Kensington, Calif.

SILICON VALLEY K LIKE AMERICA?

esse's new target: Silicon Valley"
al Issues, July 12) prompts the fol-
g: Saying Silicon Valley's work-
is diverse because 31% of it is
does not by itself meet the chal-
of the first Clinton Administra-
or establishing diversity (a work-
that "looks like America").

e arrogance inherent in attribut-
bootstrapping mindset to an in-
y given credit for contributing one-
of the U.S. economic growth since
and for which "big government,
ation, and affirmative action are
ined" should be tempered by the
ction that "big government" has
possible the establishment of such
esses in America. An appreciable
fice has been made by people of
in defense of this country to pre-
that privilege.

What continues to be lost is that the
success of foreigners in this country is
not only due to the environment made
available by "big government" but also
by the strong basic education obtained
in their own countries. Approval of tem-
porary visas predicated on corporate
contribution of funds to help provide
U.S.-born students of color a compara-
ble education to meet diversity targets
should be encouraged.

J. V. Martinez
Bethesda, Md.

DON'T BLAME NATIVE AMERICANS FOR THIS BLUNDER

As manager of the Cheyenne River
Sioux tribal buffalo herd, I notice that
you named Native Americans as the re-
cipients, as well as the responsible par-
ty, for requesting a government sub-
sidy for buffalo meat ("And now buffalo
subsidies," Up Front, May 10). Native
Americans were neither responsible for
the subsidy nor were they the recipi-
ents. We opposed the subsidy and wrote

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Readers Report

several letters to the Agriculture in our attempt to stop it. We are producing a high-quality, natural food product that is low in fat and cholesterol address the high rates of heart disease and diabetes rampant on most Indian reservations. It's outrageous that the Agriculture Dept. subsidizes the quality fatty trim from buffalo raised in the feedlots and then adds insult to injury by palming it off on Indian people through supplemental food programs.

This misinformation is harmful to efforts at producing the highest quality red meat on the market and inaccurately portrays us as participants in government blunder.

Fred Du
Gettysburg,

BUFFETT: LONG LIVE THE HAPPY CEO

If happiness on the job is an indicator of good health, Mr. Buffett should shine Methuselah ("The Warren Buffett you don't know," Cover Story, July). Who else tap-dances to work?

Beverly A. Cra
Oakton

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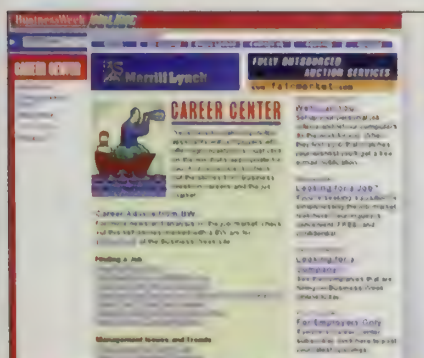
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THE NUDIST ON THE LATE SHIFT

By Po Bronson

Random House • 248pp • \$25

THE CURIOUS CULTURE OF SILICON VALLEY

Stories about Silicon Valley are becoming pretty darn pat: Take one entrepreneur with a good idea, then track the hair-raising adventures that take him from nowhere, past the brink of professional/financial/mental disaster, and on to golden success. But in *The Nudist on the Late Shift*, Po Bronson rises above this formula. By describing the days and nights of the Valley's new generation (including a nudist who toiled late at one animation company), the author delivers a revealing profile of Valley culture, with its emphasis on time, luck, and work and its conviction that nearly everyone can be just as successful as the most recent *Wired* cover boy. While the book will appeal most to those not familiar with how Silicon Valley

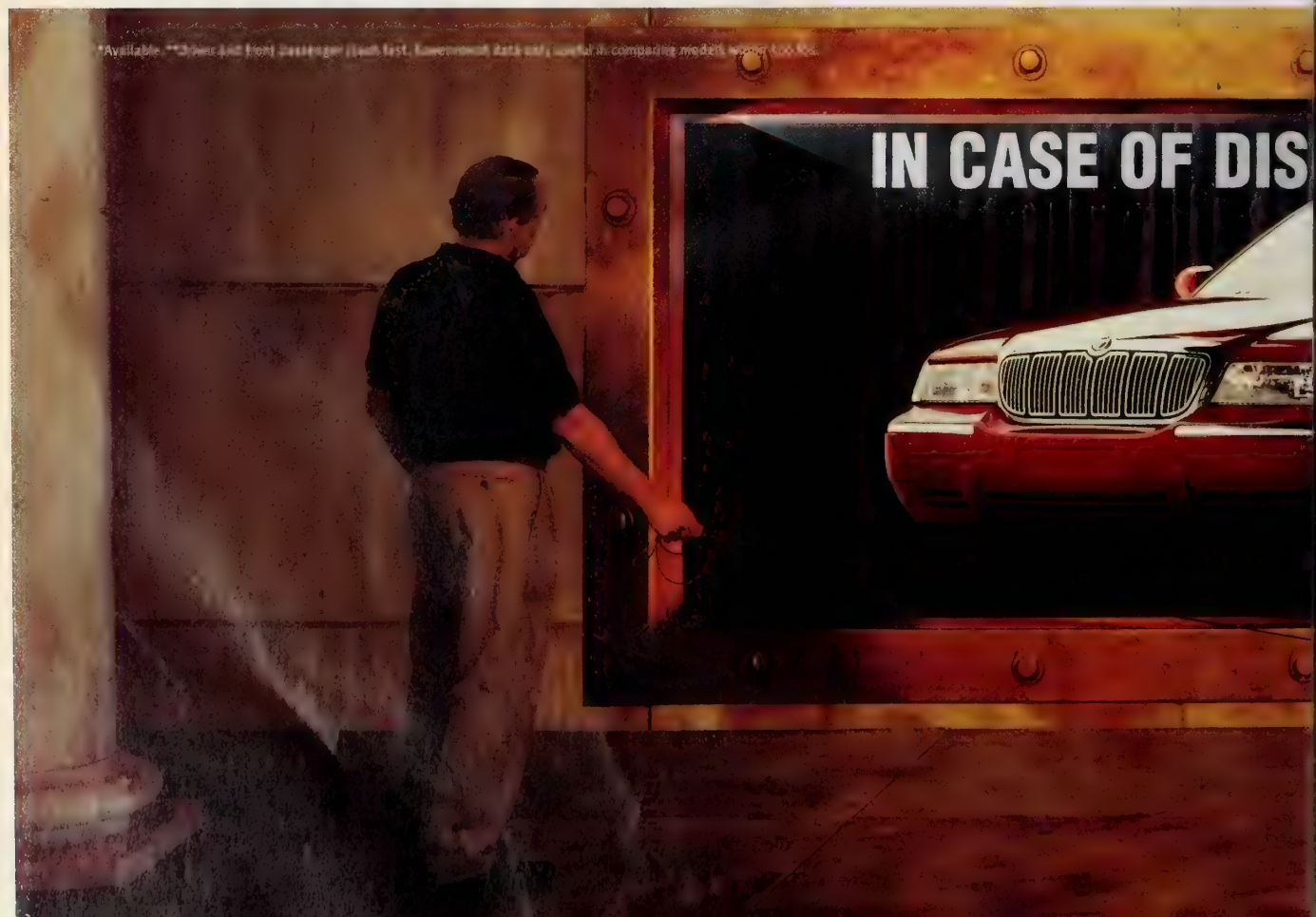
works, it's hard not to appreciate its nuanced look at the area's idiosyncrasies.

Bronson uses various people's tales to describe each of several different Valley types, including entrepreneurs, programmers, salespeople, and dropouts. His entrepreneur, Sabeer Bhatia, is an Indian engineer who founded the free E-mail service Hotmail and sold it to Microsoft Corp. for \$400 million. Hotmail has become an archetype of so-called viral marketing—free distribution over the Internet of a service that quickly becomes the object of intense buzz, often leading to exponential growth in subscribers.

Bronson provides, among other details of Bhatia's career, an account of the clever and painstaking promotion of Hotmail. Bhatia employed two products

to raise funds from venture capital: a decoy personal-database program and Hotmail. All potential investors saw the first of these, but Bhatia showed the second only to those few who he thought would ask the right questions about the first program. In a broader sense, the book offers Bhatia's story to demonstrate that there are many variables in play in making a Net company a success—none of which are image, buzz, and presentation.

Key to all such Silicon Valley triumphs, however, is the willingness to take the deep desire, to take risks. Bronson's characters react and draw lessons from the experiences of those who have succeeded. They are buoyed by the thought that the money is there to fuel their experiments—and that there's little room for failure. A French entrepreneur, for instance, displays undaunted optimism about his company, even calculating that if it doesn't work, his experience will nonetheless land him another job. Giving voice to this generation that came before us, the author observes that "to make a choice between pursuing a steady career and pursuing adventures.... In Silicon Valley



LIKE AN ANTHROPOLOGIST, BRONSON FOCUSES ON THE QUIRKS OF THE VALLEY'S STRIVERS

people no longer have to choose." chapter focused on programmers, author demonstrates how random sights can become business proposals and how such projects often end on the edge of failure. It tells how the Big Network—a Web service offering 10 versions of board games such as chess and checkers, labored to arrange a meeting with portal Snap.com. In a key demo, Big Network's founders frantically simulated a phone conversation—and an electronic version of Spades—to keep people from discovering some major bugs. Why are there bugs? Because Big Network lacked the money to hire full-time engineers—and, having burned in the past, engineers reluctant to work for stock options alone. Readers familiar with Silicon Valley occasionally feel that Bronson's observations are out of date. In one scene, ample, he describes a party where

he notices that the area's geek culture has been transformed. Why, there are these smartly attired guys around—and women! "We just watched the whirlpool of lithe bodies, of grown-up frat men in Sisley shirts and long-haired women in Bebe miniskirts—and the same thought occurred to all of the Big Network guys at just about the same time: 'Man, when did all these gorgeous women start working in this business?'" The problem here is that these demographic changes took place almost two years ago, an aeon in Valley time.

Elsewhere, the author exaggerates local quirks. At the same party, Bronson is unable to find a person he came with—so he dials the guy's cell phone number and finds him standing only 20 feet away. Such over-the-top techno-reliance is normal, the author seems to say—but it really isn't.

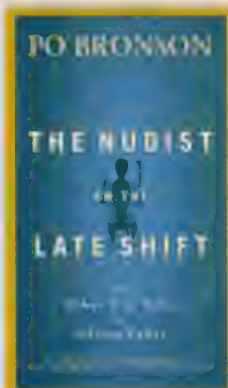
Some of Bronson's material is a little too superficial to hold a reader's interest.

One whole chapter entitled "The Futurist" is devoted to George Gilder, a trend-spotter and magazine writer. But Bronson doesn't adequately explain why he is devoting so much attention to Gilder. Gilder doesn't seem to have much more to say about the future than many other self-proclaimed soothsayers.

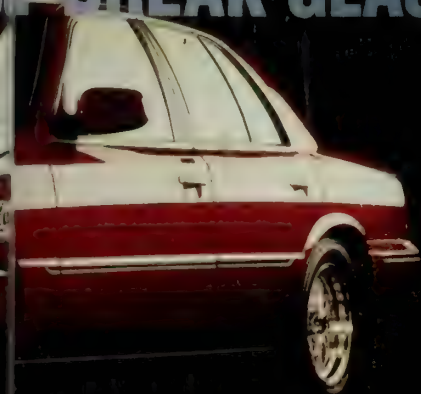
In the end, what really makes *The Nudist on the Late Shift* is Bronson's breezy, insightful writing. In the final chapter, Bronson relates a conversation he had with Novell Chief Executive Eric Schmidt in which they discuss success and failure. Bronson tells some stories of disappointment and frustration, and asks Schmidt to react. "I would be unhappy if people weren't whining," Schmidt replies. "I want them to want more.... The kind of mild dissatisfaction with what you have is a key prerequisite for success in this business." Where else do bosses view carping employees as a good thing? In Silicon Valley, it seems, no matter what happens, the sun is always shining.

BY HEATHER GREEN

Green covers the Internet for BUSINESS WEEK.



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THE BUSINESS WEEK BEST-SELLER LIST

HARDCOVER BUSINESS BOOKS

- 1 **BUSINESS @ THE SPEED OF THOUGHT** by Bill Gates with Collins Hemingway (Warner • \$30) *A detailed guide to the fast-emerging E-business age.*
- 2 **FIRST, BREAK ALL THE RULES** by Marcus Buckingham and Curt Coffman (Simon & Schuster • \$25) *A Gallup investigation into managerial success.*
- 3 **WHO MOVED MY CHEESE?** by Spencer Johnson, M.D. (Putnam • \$19.95) *Learning to accept change.*
- 4 **THE LEXUS AND THE OLIVE TREE** by Thomas L. Friedman (Farrar, Straus & Giroux • \$27.50) *How globalization is transforming the world, by The New York Times's foreign-affairs columnist.*
- 5 **THE INNOVATOR'S DILEMMA** by Clayton M. Christensen (Harvard Business School • \$27.50) *Anticipating new technologies' disruptive effects.*
- 6 **THE 9 STEPS TO FINANCIAL FREEDOM** by Suze Orman (Crown • \$23) *Practical and "spiritual" steps for managing money.*
- 7 **WHY WE BUY** by Paco Underhill (Simon & Schuster • \$25) *An anthropologist offers a "science of shopping."*
- 8 **THE COURAGE TO BE RICH** by Suze Orman (Riverhead • \$24.95) *The rites of passage—and their financial consequences.*
- 9 **THE END OF MARKETING AS WE KNOW IT** by Sergio Zyman (HarperBusiness • \$26) *Marketing strategies, by a former Coca-Cola executive.*
- 10 **DAY TRADE ONLINE** by Christopher A. Farrell (Wiley • \$29.95) *A primer for day-trading wannabes.*
- 11 **THE ROARING 2000s** by Harry S. Dent Jr. (Simon & Schuster • \$25) *Why the good times won't go away.*
- 12 **MANAGEMENT CHALLENGES FOR THE 21ST CENTURY** by Peter F. Drucker (HarperBusiness • \$27.50) *The dean of management theorists ponders the shape of things to come.*
- 13 **LIVING THE 7 HABITS** by Stephen R. Covey (Simon & Schuster • \$26) *Tales of people overcoming problems.*
- 14 **PERMISSION MARKETING** by Seth Godin (Simon & Schuster • \$24) *Give customers an incentive to hear your message, says a Yahoo! executive.*
- 15 **GUNG HO!** by Ken Blanchard and Sheldon Bowles (Morrow • \$20) *How Walton Works No. 2 fired up its employees.*

PAPERBACK BUSINESS BOOKS

- 1 **THE MILLIONAIRE NEXT DOOR** by Thomas J. Stanley, Ph.D. and William D. Danko, Ph.D. (Pocket Books • \$14) *The ways of the wealthy among us.*
- 2 **THE SEVEN HABITS OF HIGHLY EFFECTIVE PEOPLE** by Stephen R. Covey (Fireside • \$14) *Habitually popular.*
- 3 **THE MOTLEY FOOL INVESTMENT GUIDE** by David and Gardner (Fireside • \$12) *The online duo puts it on paper.*
- 4 **THE 1999 WHAT COLOR IS YOUR PARACHUTE?** by Richard Nelson Bolles (Ten Speed Press • \$16.95) *The enduring job-search bible.*
- 5 **GETTING TO YES** by Roger Fisher, William Ury, and Bruce Patton (Penguin • \$12.95) *A Harvard team's step-by-step guide to conflict resolution.*
- 6 **RICH DAD, POOR DAD** by Robert T. Kiyosaki with Sharon Lechter, C.P.A. (TechPress • \$15.95) *Teaching your kids rules of money that the rich play by.*
- 7 **THE ONE MINUTE MANAGER** by Kenneth Blanchard, Ph.D. and Spencer Johnson, M.D. (Berkley • \$11.95) *Three management techniques, conveyed in brief story form.*
- 8 **THE DANCE OF CHANGE** by Peter Senge, Art Kleiner, Charlotte Roberts, Richard Ross, George Roth, and Bryan Smilor (Currency • \$35) *A workbook on "the learning organization."*
- 9 **BARRON'S DICTIONARY OF FINANCE AND INVESTMENT TERMS** by John Downes and Jordan Elliot Goodman (Barron's • \$12.95) *What is an oligopsony anyway?*
- 10 **BUFFETTOLOGY** by Mary Buffett and David Clark (Fireside • \$14) *An ex-daughter-in-law's take on Buffett's techniques.*
- 11 **THE CIRCLE OF INNOVATION** by Tom Peters (Vintage • \$12.95) *"Create waves of lust," says business writing's No. 1 cheerleader.*
- 12 **HOME BUYING FOR DUMMIES** by Eric Tyson and Ray Brown (IDG Books • \$16.99) *Getting your dream house.*
- 13 **BUILT TO LAST** by James C. Collins and Jerry I. Porras (HarperBusiness • \$15) *How 3M, Wal-Mart, Procter & Gamble, and others became standouts.*
- 14 **1001 WAYS TO REWARD EMPLOYEES** by Bob Nelson (Workman • \$10.95) *Give them a champagne brunch, a casual-dress day—or plain old cash.*
- 15 **INVESTING FOR DUMMIES** by Eric Tyson, MBA (IDG Books • \$19.99) *From stocks to small business—with cartoons, too.*

BUSINESS WEEK's Best-Seller List is based on a survey of chain and independent booksellers that carry a broad selection of books on economics, management, sales and marketing, small business, investing, personal finance, and careers. Well over 1,000 retail outlets nationwide are represented. Current rankings are based on a weighted analysis of unit sales in June.

Reviews and more are available on AOL (Keyword: BW) or www.businessweek.com

HOT TYPE

IN *DAY TRADE ONLINE*, NO. 10 AMONG THIS month's hardcover best-sellers, Christopher A. Farrell (not to be confused with BUSINESS WEEK's Christopher Farrell) recommends a cautious strategy: He advocates making high-percentage trades in boring closed-end funds and utility stocks, rather than flipping volatile Net stocks. He doesn't promise readers will make tens of thousands a day. Instead, he says they can squeeze out gains of \$125 or so on most of their daily 20 to 30 trades. That amounts to a good six-figure yearly income but hardly the vast riches that have lured thousands to full-time trading careers. Of the many day-trading books on the market, Farrell's is one of the most readable. He builds on the basics slowly, al-

beit with some repetition, advising readers to choose stocks carefully, get in and out quickly, and aim to "hit singles home runs." He explains the pros and cons of online discount brokerage accounts—not the souped-up, high-speed systems many day traders use—and says you should expect occasional glitches as part of the cost of doing business at home. *Day Trade Online* is most successful at creating a realistic picture of the life of an online day trader. Farrell, 26, finds it's fun, exciting, and profitable. But he admits that there's no social interaction and that you won't get much respect. He can't help wondering if he'll still be day trading five years from now or if he will have taken his talents elsewhere.

BY AMEY ST

SCIENT DILEMMA

NO ONE IS WAITING TO BUY THIS BOOK.

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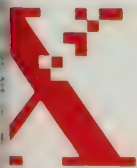


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BY STEPHEN H. WILDSTROM

THE WIRELESS CONTINENT

Europe's state-of-the-art standard makes digital communications a snap

I am sitting on the balcony of my hotel room in Florence with my laptop and a cell phone, looking across the Arno to the Fortress Belvedere, while my E-mail downloads. The bright Tuscan sun makes it a bit hard to see the laptop screen, and the buzz of motorbikes isn't good for concentration, but otherwise the arrangement is just about perfect.

I'm in Italy largely because the Children's Chorus of Washington, a group I helped start, is performing in a choral music festival. In addition to keeping up with my E-mail, I'm also posting reports and pictures of performances to the Web site I maintain (www.childrenschorus.com). And I'm doing it all without connecting my computer to a phone line.

SLOW GOING. For a long time, I had been hearing reports of how advanced wireless voice and data communication is in Europe. Now, mixing business and pleasure, I'm trying it myself. Bottom line: The glowing reports are true. You still need a sack of adapters to connect a modem to European phone lines, but a single cell phone works from Land's End to Vladivostok. And the right phone can double as a slow, but reliable, modem for a laptop or Windows CE handheld computer.

The secret is Europe's unified Global System for Mobile Communications (GSM), a

continentwide digital network. Intelligent phones and extensive agreements among carriers make roaming seamless wherever GSM is used—and it is the standard nearly everywhere except in the Americas, for the most part, and in Japan.

The U.S. has a national analog cell network. With a cellular-ready modem,

analog systems, but it uses special radio modems rather than cell phones.

The digital situation is far worse. While most of the world agreed on GSM, and Japan adopted its own PDC standard, the U.S. unwisely let cellular licensees pursue the technology of their choice. The result has been a digital disaster. Four different standards, including GSM, are in use in the U.S. A phone built for one system won't work on another. Even U.S. GSM is odd. It uses different frequencies than the rest of the world does, so only a few multi-frequency phones, such as the Ericsson 1888 World that I'm using, work on both U.S. and international

PCS Group are working to add data capacity to networks, but it's a hugely expensive job.

In contrast to the digital coverage in the U.S., I can use my phone for voice or data just about anywhere in Italy, including on city trains. For now, GSM transmission is limited to 14,400 kilobits per second, slow for Web browsing but quite acceptable for E-mail. Because my laptop controls the phone with an infrared link, I don't have to do to make a call is lay the handset next to the computer and click a Windows dial-up working icon. Thanks to my account with MCI Worldnet, I connect to the Internet through local numbers in Europe.

The only real problems have been caused by the slowness of Windows 98's infrared link software and occasional crashes it causes. Other phones connect to ready modems with serial cables. My Ericsson phone also works with Windows handhelds, which provide more robust infrared links.

Roaming with a GSM phone in Europe is not cheap, but it beats the cost of calling hotels. My phone was supplied by Omnipoint Communications Services, a provider of GSM service to the eastern and midwestern U.S. Calls in Italy and France cost 29¢ to 70¢ a minute, and calls to the U.S. run to \$1.40 per minute.

Popular as cell phones have become in the U.S., they are even more popular in Europe, where even from gondoliers in Venice to nuns in the Vatican, you can be seen chatting away. The technology is likely to advance faster here than in the U.S., with 115 kbps service coming soon. For now, slow speeds aren't that much of a problem right now. The real CyberLouvre is just around the street?



you can connect to the Internet over an analog phone. But connections are slow and unreliable, so relatively few people try. A technology called Cellular Digital Packet Data (CDPD) allows direct Internet connections over some

networks. None of the digital systems is available in all major cities, and coverage gets spotty even in outer suburban areas. Only GSM currently can handle data. Equipment maker Qualcomm Inc. and operators such as Sprint

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MOTOROLA EMBEDDED SOLUTIONS

BY LAURA D'ANDREA TYSON

HMOs: A GOOD IDEA THAT COULD GET A LOT BETTER



OPTIONS:
Consumers
deserve choice
among
competing
suppliers and
access to
information,
in short, a bet-
ter patient's
bill of rights

Laura D'Andrea Tyson is dean of the Haas School of Business at the University of California at Berkeley and was President Clinton's chief economic adviser.

Health-maintenance organizations have become the target of festering hostility. To many Americans, the bad guys of the health-care system are no longer greedy, overpaid doctors but greedy, overpaid insurers. And in a sharp turnaround from the Harry and Louise days of defeat for the Clinton health-care plan in 1994, many Americans are now looking to the federal government to protect health care from the hard-heartedness of the market system.

There is indeed a role for government in making the health-maintenance industry more responsive to the needs of the public. But that is best accomplished within the context of a market system. Over the years, the U.S. has repeatedly opted for market mechanisms over government controls to determine both the price and the availability of most forms of health care. HMOs, in particular, are the outgrowth of the market system—a private response to the rising health costs imposed on employees, employers, governments, and the uninsured. And this response has had two positive effects. It has slowed the upward spiral in health-care spending, at least temporarily. And it has developed new guidelines and standards of practice that have discouraged unnecessary and even harmful medical procedures.

But haven't these benefits been purchased at the expense of overall quality in health care? Despite well-publicized and sometimes heart-wrenching horror stories about HMO behavior, there is so far no evidence that HMOs provide consistently worse care than fee-for-service plans—or consistently better care, for that matter.

What can be done to reduce individual occurrences of HMO malfeasance and to guarantee that HMOs safeguard the quality of health care? Like markets for any good or service, markets for health care work best when consumers have both choice among competing suppliers and the necessary information to make wise choices.

All too often, consumers of health care have neither, which is why an effective patient's bill of rights—not the largely toothless one passed by the Senate Republican majority—is essential. Ideally, consumers should have a choice among several competing health plans, as the old Clinton Administration health-care reform mandated. At the least, consumers should have options within a given

health plan to select among different levels of care, including different levels of discretion in choosing among doctors. Health-care plans with more discretion and higher service quality would, of course, be expected to cost consumers more.

All patients must also have the right to sue HMOs for negligence and damages. Lawsuits will act as a deterrent to substandard care and fraudulent behavior on the part of HMOs. At the same time, this right should be restricted by rules requiring prior review of patient complaints by independent medical experts and limiting the size of punitive damage awards. In the absence of such reforms, the drawbacks of the current medical practice system, including skyrocketing costs and frivolous lawsuits, are sure to undermine HMOs.

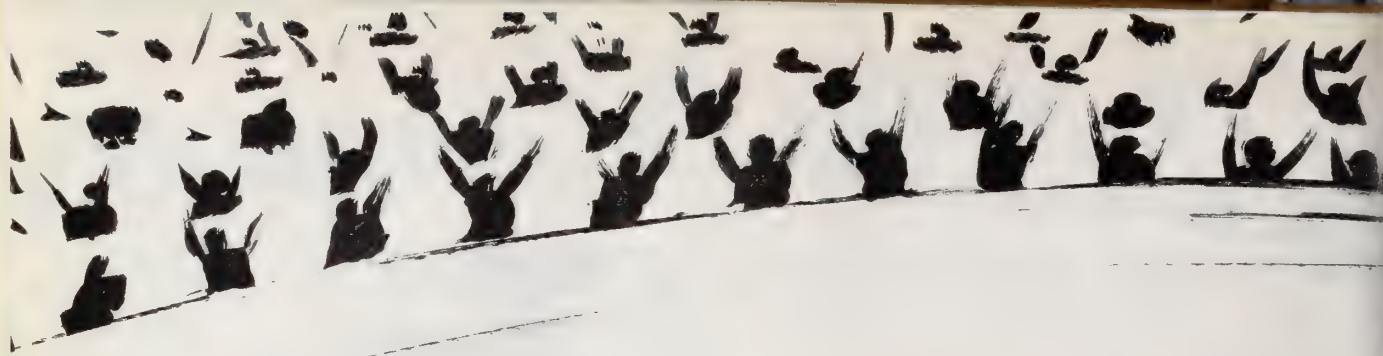
HEALTH-CARE SEC? Another prerequisite for well-functioning markets in health care is the availability of information. In this respect, many HMOs have been their own worst enemy, preferring secrecy over transparency in dealing with doctors and patients. The National Committee for Quality Assurance (NCQA), a private nonprofit organization that accredits health plans, also provides comparative information on the structure and performance of individual HMOs. Such information is based on voluntary self-reporting by HMOs and can be made available from the public at their request. In a recent NCQA analysis indicates that HMOs that release information on the quality of care and performance do a better job than those that do not.

But information on HMO performance is limited, lacking in credibility, and not routinely available to all consumers. As a result, the Progressive Policy Institute report that calls for participants in the health-care market to benefit from a Securities & Exchange Commission-type organization requiring compulsory registration and public disclosure of certain kinds of information on a timely basis by all accredited health plans. Certainly, the availability, credibility, comprehensiveness, and timeliness of information released by HMOs should be an integral part of a patient's bill of rights.

An adequate patient's bill of rights will help to prove the market for health care. But it will still have to come to grips with how to protect life and enhance human dignity in a situation of limited health resources.



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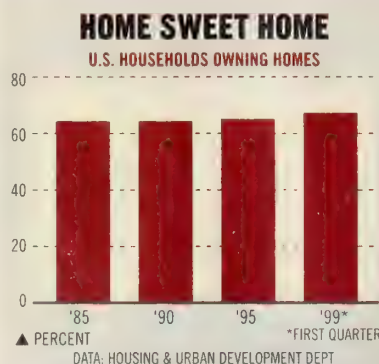
BY LAURA COHN

HOME IS WHERE THE NEST EGG IS

The wealth effect of pricier houses

Where have typical Americans socked away most of their money? Hint: not the stock market. The answer is still real estate, according to a study by the Federal Reserve Bank of New York. In 1998, it's true, corporate equity overtook real estate as the biggest asset in the household sector as a whole. But those stockholdings are highly concentrated. According to the Fed's Flow of Funds Accounts and Survey of Consumer Finances, only about 50% of the households in the U.S. own any stock at all, either directly or indirectly. Most privately held equity is owned by the richest 10% of households.

On the other hand, two-thirds of all households own their own home (chart). The house remains the dominant asset of most households even in later years, when people tend to have more money available for other investments. The median 25-year-old homeowner has no



stocks at all, while the median 55-year-old homeowner has only 3.5% of household assets in equities. The study, which was conducted by New York Fed economists Joseph Tracy and Henry Schneider, and Sewin Chan of Rutgers University, concludes that the latest bull market in stocks has had "little effect" on the makeup of the assets of the typical U.S. family.

Much has been made of the "wealth effect" of the bull market on consumer spending. The idea is that as stock prices have soared, people's wealth has risen, and they feel free to increase their spending as a share of income. That's certainly true for families that own lots of stock. But for the average American family,

the more important wealth effect may be rising housing prices. According to the National Association of Realtors, housing prices rose 6.1% in 1997 and 5.7% in 1998. And 60% of owner-occupied homes are mortgaged, which amplifies the impact of a rise in the price of a home on a family's net wealth.

\$6 AN HOUR? NO PROBLEM

A minimum-wage hike's slim effect

With U.S. unemployment hovering at just over 4%, its lowest level in a generation, practically anyone who wants a job can find one. Most small businesses say their hiring practices wouldn't be affected much if the minimum wage were to rise from its current \$5.15 an hour, because they're already paying above the minimum wage, according to a recent survey by the Jerome Levy Economics Institute in Annandale-on-Hudson, N. Y.

Some 500 small companies were asked whether they would be hurt if the minimum wage were to go up to \$6 an hour. About 13% of those surveyed said they would have to lay off workers, hire fewer workers, or do something else to make up for having to pay their employees more. That's down from the 21% of companies surveyed in 1998 who said they would feel an effect from such a hike. When asked whether their company would be hurt if the minimum wage rose to \$7.25 an hour, a bigger percentage of the businesses—36%—said it would. "There are limits" to how far it can go, says Oren M. Levin-Waldman, a resident scholar at the institute who conducted the study.

Of course, the survey was taken with business booming and the labor market tight as a drum. Should the economy slow, the negative impact on small business may well be a lot more severe.

TO GRANDMA'S HOUSE THEY GO

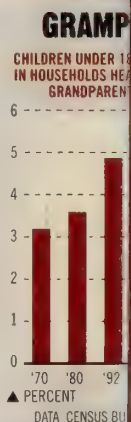
A change in where U.S. kids live

More children in the U.S. are living in households headed by their grandparents. The numbers have grown throughout the '90s even as the economy boomed. In 1997, the most recent year for which figures are available, 5.5% of all children in this country un-

der the age of 18, or 3.9 million, live in such homes. That's up from 4.9% in 1980 and 3.6% in 1980, according to analysis by Ken Bryson and Lynn Casper of the U.S. Census Bureau.

The study shows that two-thirds of the children in homes headed by a grandmother alone are living in poverty. In addition, children living only with grandmothers are twice as likely to be black. The grandparents who head these families are not always elderly. Just 15% of the grandmothers are 65 or older. Children who live in homes with just grandmothers are also more likely to be poor than those who live with their parents to be without any health insurance.

What's behind this trend? The bureau points to a long list of social ills: child abuse, neglect, AIDS, higher drug use among parents, and mental and physical abuse. The authors say that changes in welfare are adding to the pressures on families headed by grandparents.



PUSHING THE PANIC BUTTON

Stock investors tended to overreact

The devaluation of the Thai baht in July, 1997, and the crisis that followed in Asia led to giant swings in stock prices. A Federal Reserve Board study by economists Graciela L. Kaminsky and Sergio L. Schmukler examines the largest one-day swings in stock prices among nine Asian nations from January through May, 1998. They conclude that investors tended to overreact to news during the crisis.

The evidence? First, the regional stock markets reacted more extremely to bad news, such as downgrades of credit ratings, than to good news, such as announcements of agreements with the International Monetary Fund. Second, increases in prices after good news tended to stick, indicating that the market's rational reactions to new circumstances were often followed by irrational dips on bad news didn't last, indicating an element of irrationality.

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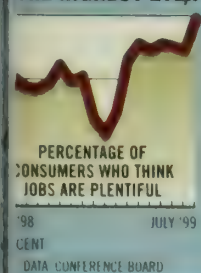


IT'S NOT ABOUT THE GROWTH RATE

Lead, Greenspan is watching labor markets for signs of overheating

U.S. ECONOMY In all the argle-bargle over what Federal Reserve Chair Alan Greenspan did or didn't say about interest during his semiannual Humphrey-Hawkins testimony before Congress on July 22 and 28, you might miss a humorous—and important—exchange between the Fed chief and Representative Barney Frank (D-Mass.). The congressman asked, "At what rate can we do without giving you *agita*?" Greenspan replied that he could answer that "in a very unusual way." Frank asked, "Like, directly?" To which, Greenspan said, "That would give you a heart attack." Nevertheless, Greenspan's answer was very revealing about his theory of preemptive policy and, thus, the conditions that will determine the Fed's move on interest rates. The unusual part was while Greenspan's stated policy goal is "maximum sustainable growth," which is determined by the long-term trends in productivity and labor-force growth, he did concede that he did not know what that growth rate is. However, he said the number, as it relates to policy, "shouldn't be our concern. Our concern should be the imbalances that emerge."

CONFIDENCE OVER JOBS AT THE HIGHEST EVER



will have to act promptly and forcefully to pre-empt imbalances from arising that would only require a disruptive adjustment later..."

WHAT DATA will the Fed be looking at? Without question, Greenspan's chief focus will be on the labor markets, as he looks for evidence that the boom in spending is straining the economy's ability to absorb it. The chairman suggested that any further drop in the unemployment rate or a reacceleration in growth would be red flags. So far this year, strong job growth has heightened consumer optimism, but even extremely tight job markets have

not given a signal that the economy is out of balance, mainly because the speed-up in productivity growth has helped relieve pressure on costs and prices.

As Greenspan warned, however, "Should productivity fail to continue to accelerate, and demand growth persist or strengthen, the economy could overheat." It's not just that productivity growth must remain strong: It must continue to grow ever faster. The problem for Fed policy in this particular business cycle, Greenspan said, is that "when productivity is accelerating, it is very difficult to gauge when an economy is overheating." Consequently, he believes that any signs that the economy is starting to boil over will show up first in the labor markets.

Because the speed-up in productivity, from about 1% annually during the 1980s and early 1990s to about 2% in the past four years, is a relatively new phenomenon, driven in part by technological innovation, Greenspan says a key

question is whether productivity growth stays at its recent higher rate, drops back, or climbs even more.

On that, the Fed chief gave a strong hint about where he stands: "The business and financial community does not as yet appear to sense a pending flattening in this process of increasing productivity growth." He said that was the impression from corporate executives and that it was also suggested by ongoing upbeat forecasts of corporate earnings.

THE FED'S FORECAST, which projects economic growth in the 3½%-to-3¾% range for 1999 and in the 2½%-to-3% range in 2000, appears to embody a slight pickup in productivity growth from the 2% trend in recent years (table). Indeed, productivity in the second quarter, to be reported on Aug. 5, appears to have been quite good, following gains averaging nearly 4% in the two previous quarters.

Ever faster gains in productivity are necessary because demand by consumers and businesses shows no sign of slowing down at a time when foreign demand is starting to pick up after a two-year lull. New orders for durable goods rose 0.3% in June on top of a 0.8% gain in May. And despite higher mortgage rates, June sales

THE FED'S VIEW OF THE ECONOMY

CENTRAL TENDENCY FORECAST		
FOURTH-QUARTER-TO-FOURTH-QUARTER CHANGE		
	1999	2000
REAL GDP	3½-3¾%	2½-3%
CPI	2½-2¾%	2-2½%
UNEMPLOYMENT*	4-4¼%	4¼-4½%

*Fourth-quarter level

DATA: FEDERAL RESERVE

Business Outlook

of existing homes rose to a record annual rate of 5.53 million (chart), suggesting strong demand for household goods in coming months.

Moreover, consumer confidence, while lower in July, remains historically high. The Conference Board's index dipped to 135.6 in July, from a 30-year high of 139 in June. Also, the percentage of households who think "jobs are plentiful" jumped to 49.8%, the highest ever, suggesting that job insecurity is waning. Greenspan has cited the fear of layoffs as one factor holding down wage pressures in such a tight labor market.

TIGHT LABOR MARKETS aren't the only concern. Another imbalance that Greenspan noted was the shortfall between private-sector savings and investment, which is being filled by foreign investment, resulting in mounting U.S. international indebtedness. Greenspan worries that, as foreign economies revive, capital inflows from abroad "may be difficult to sustain." He warns that without a rebound in U.S. savings, the dollar could weaken and market interest rates could rise. The recent drop in the dollar against the yen and the euro may well be the first signs that foreign capital is not coming into the U.S. in the quantities it had been.

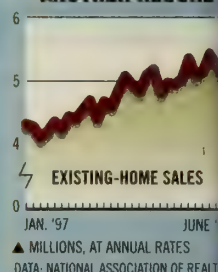
Greenspan also suggested that the Fed will be keeping a close eye on commodity prices, which are generally picking up in response to the firming in international demand. But the signals here may not be as reliable as the

signals from the labor markets. Greenspan said as the increasingly high-tech economy becomes more conceptual than physical, "the actual impact of industrial commodities on the general price level diminishes." However, Greenspan said that commodity prices tend to reflect the order intake and general level of activity in the industrial sector, which he referred to as "a still significant part of the economy."

One potential sign of imbalance on which Greenspan did not spend much time was the stock market and the possibility of a market bubble. He said that "identifying a bubble in the process of inflating may be among the most formidable challenges facing a central bank, pitting its own assessment of fundamentals against the combined judgment of millions of investors."

Greenspan admitted that even a productivity acceleration, which embodies significantly higher rates of return on capital, does not ensure that stock prices will not overextended. But for now, he seems willing to give the market's exuberance, irrational or not, the benefit of the doubt. Had he said anything else, it might have given investors a heart attack as well.

HOMEBUYING SETS ANOTHER RECORD



CZECH REPUBLIC

KEEPING FINGERS CROSSED FOR RECOVERY

Will seven times be the charm? Analysts are hoping that another cut in Czech short-term interest rates, after six cuts by the central bank so far this year, may finally turn the ailing economy around.

The Czech economy has been shrinking since late 1997 (chart). In the first quarter, real gross domestic product was down 4.5% from a year ago, and the monthly data suggest a further drop in the second quarter. In particular, consumer spending, which added positively to growth in the fourth quarter of 1998 and the first quarter of 1999, may have slipped in the spring. Industrial production is also weak. In May, total output fell 5.7% from a year ago, with

manufacturing alone off a steep 10.1%. And construction was down 7.9% in May.

Consumers are reluctant to increase their spending because unemployment remains so high. The



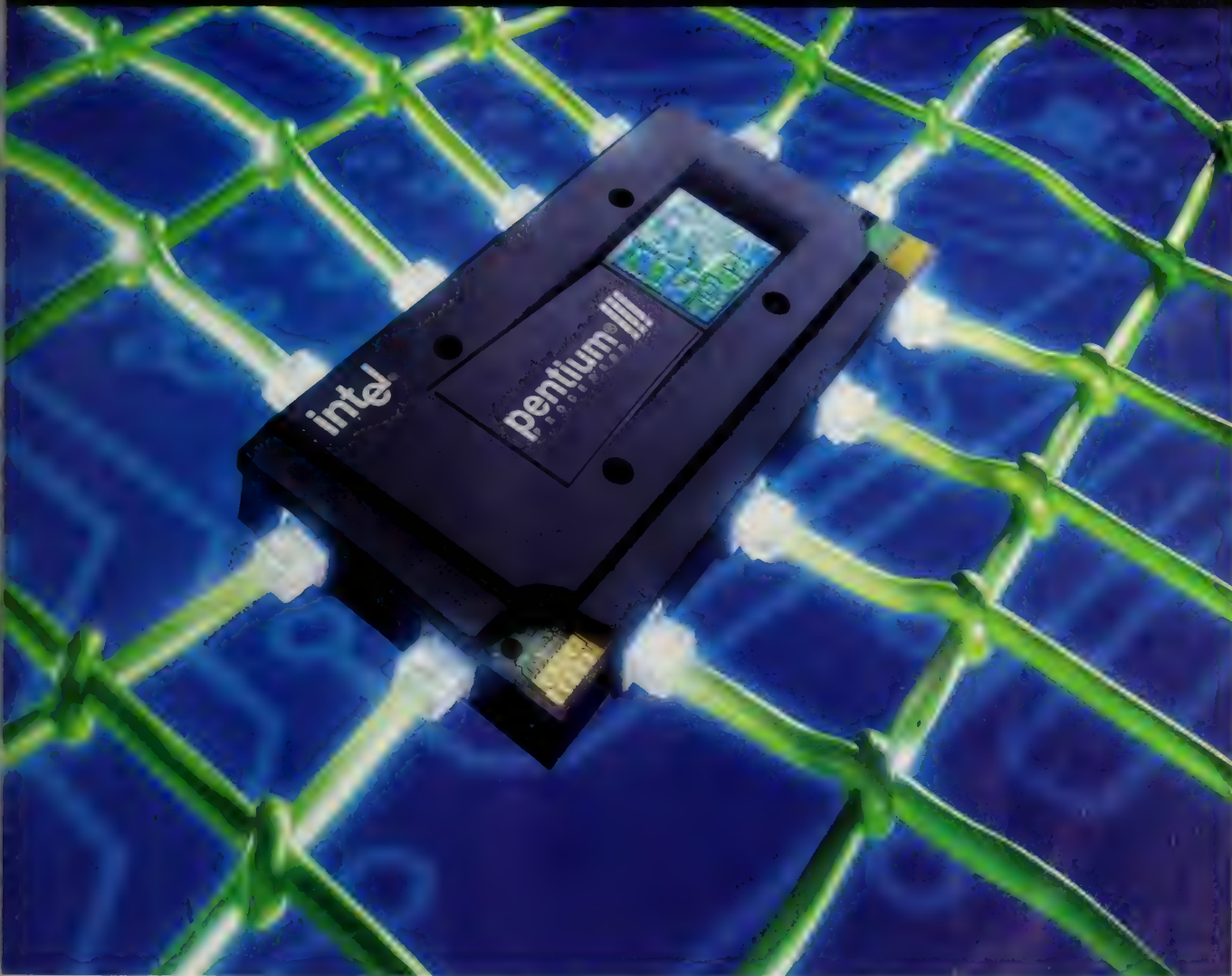
jobless rate hit 8.8% in June, the highest level since Czechoslovakia split apart in 1993. Slowing inflation, however, has helped boost household buying power. In part because of the ongoing recession, the yearly inflation rate has plummeted from 13.4% in early 1998, to 2.3% in June.

On July 21, the Finance Ministry revised its economic outlook lower. It now expects real GDP to fall 1% this year, worse than the

0.8% originally projected. Private economists, however, are more pessimistic because they do not see as great a pickup in the second half as the government does. Real GDP shrank 2.3% in 1998.

Falling interest rates may sap the sagging domestic sector and curb the recent runup in the Czech koruna, which has risen 5% against the euro since March. The strength partly reflects an improvement in trade. The trade balance has swung from a deficit of \$16 billion in early 1997 to near balance in May. Now, with inflation under control, the hope is that a weaker currency will bring only good to the economy. Namely, it will make Czech exports more price competitive just as the recovery in the euro zone lifts demand for imports in that region.

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RECOVERY WIND

The scent of fast money has returned to East Asia. From South Korea to Malaysia, economies have pulled out of last year's death spiral. Bourses have rebounded to their pre-crisis levels. Global investors ripping open their first-half Asian mutual fund statements saw 40% returns on Asian funds—outside of Japan. The daring souls who jumped into Japan's over-the-counter market saw their money double during the period.

But before you read yet another Wall Street research report trumpeting the Great Asia Turnaround, it's worth asking exactly what sort of recovery is under way. Given the recent headlines, you have to wonder. In South Korea, a government-arranged bailout in late July to keep colossal Daewoo Group from sinking under \$57 billion in debts

caused Seoul's KOSPI index to tumble 11% in two days before bouncing back. In Tokyo, the government now hints that the economy, after expanding in the first quarter of 1999, may have contracted again in the second. In China, rumors of a devaluation have resurfaced (page 30), rattling markets in Hong Kong. In Thailand and Singapore, monetary authorities are warning that their economies aren't out of the woods.

In country after country, investors and policymakers are taking a second look. Their conclusion: The recovery is on shaky ground, and the returning rush of global funds is blunting the drive for reform that could make it more substantial; the region still lacks the institutions needed to handle the cash without detonating another boom-and-bust cycle.

Almost all of the runups in stocks and growth can be explained by heavy government deficit spending, a natural bounce in output as businesses replenish their inventories, and the return of easy money. Firmer global prices for prod-

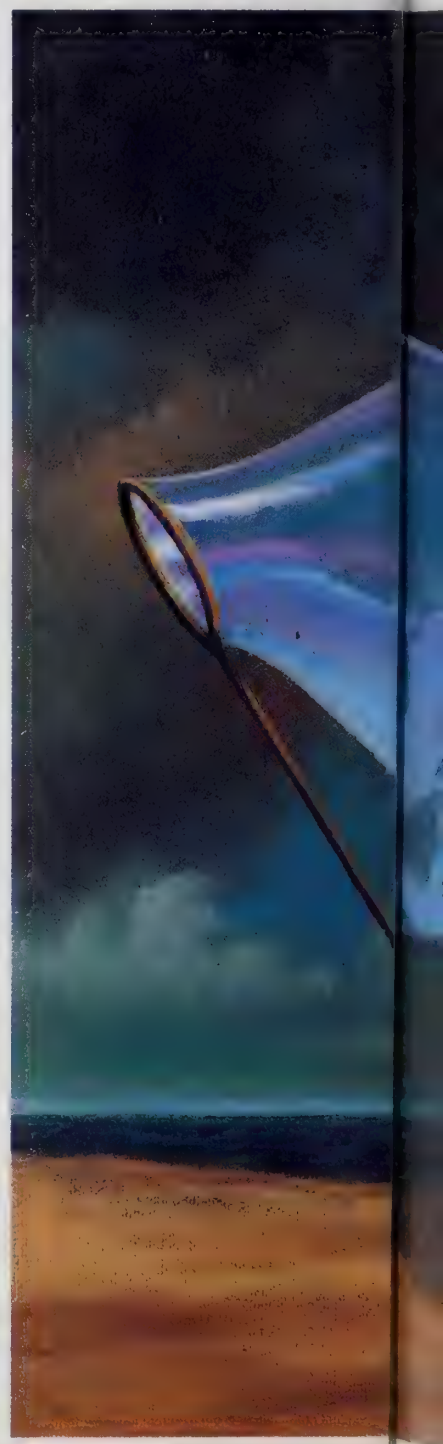
ucts such as computer chips and a rebound in luxury goods have also helped.

But the biggest factor has been old-fashioned Keynesian stimulus. Interest rates have fallen an average of 7.3 percentage points in Indonesia, Malaysia, the Philippines, South Korea, and Thailand. And countries that had no deficits have become profligate spenders—with the five crisis countries expected to rack up deficits amounting to 5% to 6% of economic output in 2000, estimates Asian research director Jean-Michel Paul of Rabobank International. He calculates that 80% of Asia's growth this year and

Markets in Asia are soaring, but the region's economies are shaky, and change is slow

the "lion's share" of its stock rebound come from government stimulus. When the costs of fixing banks are factored in, Deutsche Bank says Thailand's public deficit could soar to 8.5% of gross domestic product in 2000.

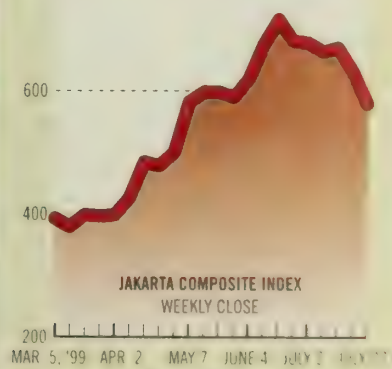
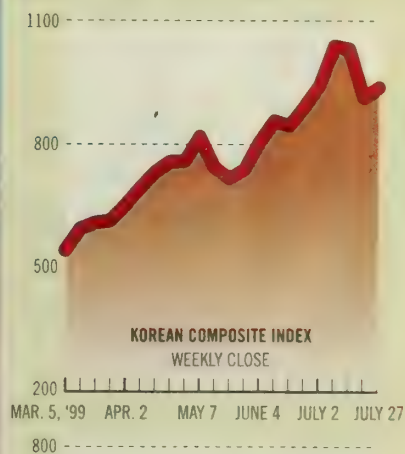
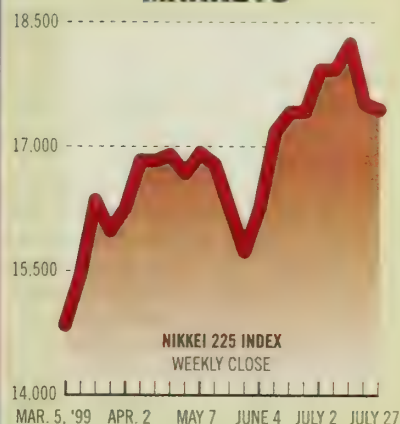
Signs of economic life, ranging from projected 1999 growth of 2% in Thailand to a heady 8% in Korea, have caused the global investment herd to storm back. In 1997 and 1998, some \$43 billion in capital from foreign lenders and equity investors fled Asia's crisis countries. While foreign bank lending remains dismal, stock investors are returning. When Hong Kong, Singapore, and Taiwan are included with the crisis countries, figures Hongkong & Shanghai Banking Corp., \$30 billion could arrive in 1999. Japan is luring \$10 billion a month. Former Japanese Finance Minister Eisuke Sakakibara is among many analysts who do not believe this gush of enthusiasm indicates long-term confidence. "This is cyber-capitalism," says Sakakibara. The in-



OUT REFORM



ASIA'S JUMPY MARKETS



DATA: BUSINESS WEEK

flows are "freewheeling and volatile."

Meanwhile, reform has lost momentum. In Thailand, for example, dud loans account for 48% of total bank loans, up from last summer's. In Indonesia, the figure is more than 60%. Beijing's failure to clean up the bad loans of its banks and state enterprises, meanwhile, is one reason why the campaign by Premier Zhu Rongji to expose industry to global competition is meeting resistance.

In Korea, the rescue of Daewoo was only the latest sign of how little has changed since 1997. Under heavy government pressure, Daewoo earlier this year had promised to sell off its shipyard, electronics businesses, hotels, and other weak operations. But it is setting unrealistic prices for the assets—and restructuring has been minimal. As Daewoo neared the brink of default, the government strong-armed banks to roll over more than \$16 billion in debt.

After getting off to a strong start in 1998, the reform drive by President Kim Dae Jung has stumbled. The government has not managed to close either of two deals to sell insolvent banks to foreigners. The *chaebol* have defied attempts to cut off their access to new money by exploiting a government program to promote mutual funds. By appealing to Koreans' patriotism, groups such as Hyundai and Samsung have raised more than \$10 billion by setting up "invest in

Korea" funds. The injection of these funds into Korean equities goes a long way toward explaining the stock market's 79% rise since March.

Crony capitalism has also proved durable in Southeast Asia. Malaysian Prime Minister Mahathir Mohamad has used the country's few sound companies, as well as public funds earmarked for cleaning up banks, to prop up ill-conceived ventures, such as national carmaker Proton. Thailand's drive to sell bad banks is running out of steam. "With the signs of recovery, people are not taking reform seriously," says Arporn Chewakrengkai, an economic adviser to Thai Prime Minister Chuan Leekpai.

The bounce in Asian exports, up 4% in Thailand and Malaysia and by 8.5% in Korea, isn't particularly impressive, either. That's way off the pace of the early '90s and mainly due to such cyclical factors as a spurt in demand for computer equipment rather than better efficiency. Instead of being broad-based, "the recovery has been in some senses too swift, too dramatic, and too quick," warns Goldman Sachs Asia Chairman Mark Schwartz. "There is still significant restructuring that needs to be done."

What about Japan—the regional giant? Its interest rates of just 0.25% "are the lowest on the planet," notes Nomura Research Institute Chief Economist Richard Koo. Yet new lending is still



contracting: Banks are leery of extending credit to companies already in debt. Financial deregulation is now under way, but Japan's service sector is still starved by red tape, while telecom and transport rates remain exorbitant. Meanwhile, as Tokyo continues to pour billions into wasteful construction projects and less bank bailouts, Japan's gross domestic product has hit \$4.6 trillion, or 110% of GDP. This year, Japan should overtake Italy as debt king of the industrialized world.

COMMENTARY

By Dexter Roberts

DON'T LOOK NOW, BUT CHINA MAY DEVALUE AFTER ALL

Whenver Asian currency markets have trembled, China has won plaudits by insisting that it wouldn't devalue the yuan. But in mid-July, central bank Governor Dai Xianglong started laying the groundwork for reneging on this promise. Answering reporters' questions in Shanghai, he opened the door to an eventual devaluation. Remarkably, investors at home and abroad were not spooked.

Indeed, financial markets are assuming that the yuan will be devalued, even if they don't know exactly when and by how much. And the calm on global markets is a testament to the newly acquired skills of China's monetary authorities in managing expectations. Their moves are sound: The last thing that China and Asia need is another currency shock.

The risks of letting the market feed

upon its own fears were great. Social tensions inside China are running high: A further 15 million people are expected to lose their jobs this year because of Prime Minister Zhu Rongji's reforms of the inefficient state sector of the economy. A poorly handled devaluation could spark a run on local banks by edgy citizens and wipe billions off the value of red-chip Chinese stocks listed in Hong Kong. That would force Hong Kong's government to decide whether or not to maintain its own dollar's peg against the greenback.

Deliberately weakening the currency is still a policy move of last resort for Beijing

Risky as a devaluation might be, however, China's leaders need to take the option open as they mull over economic strategy at their annual session that began at the Beidaihe seaside resort in late July.

GETTING BOLDER. They have won plenty. The government's massive crackdown on the Falun Gong sect in late July, for example, is a ready-made earlier breakdown in internal stability when thousands of that sect's members took authorities by surprise and rioted in central Beijing in April. Meanwhile, Taiwan President Lee Teng-hui's angering Beijing with increasingly strident statements about eventual Taiwanese independence.

Beijing faces enormous economic challenges too. Premier Zhu's reforms have rifts inside China's huge bureaucracy. Meanwhile, in June, consumer prices



...n't out of the woods yet

ear, Japan's stock market has benefited most from foreign money. The 27% gain in the Nikkei stock average since the crash has been a boon to Japanese companies, many of whose assets are majority holdings of sister companies. Ohara, an economic adviser to Prime Minister Keizo Obuchi, estimates that Japanese companies and financial institutions have \$200 billion in paper gains. But this could be wiped out if the foreign market changes course—as the Japan-

ese well know. In early 1994, the Nikkei jumped about 3,000 points, as foreigners bet on a recovery. The yen rose from 112 to 100 to the dollar, throttling Japanese export growth. The economy swooned. So did the Nikkei. "We don't want to make that mistake again," says Sakakibara. So since June 10, the Bank of Japan has spent \$25 billion to keep the yen from soaring against the greenback. That didn't keep the yen from flirting with 115 on July 27. Executives such as Toyota Motor Corp. Chairman Hiroshi Okuda want to see the yen at more than 120. "The Japanese economy depends on external demand," warns Okuda. "If the yen appreciates further, the economy will suffer."

So far, other Asian stock markets have risen mostly on local investment and inflow from small foreign players. But foreign investment has already harmed Asian corporate restructuring. Able to raise money through equity issues again, companies are no longer desperate to shut or sell weak affiliates. Foreign investors, who salivated at fire-sale prices on Asian assets last year, are finding negotiations much tougher. That's one reason why South Korea's efforts to sell off Korea First Bank and Seoul Bank have run into repeated snags. The same thing is happening in Southeast Asia, says Hugh Young, managing director at Aberdeen Asset Management Asia Ltd. in

Singapore. "Deals are being put on hold because the stock market is so strong," he says. "Companies are holding out for better prices."

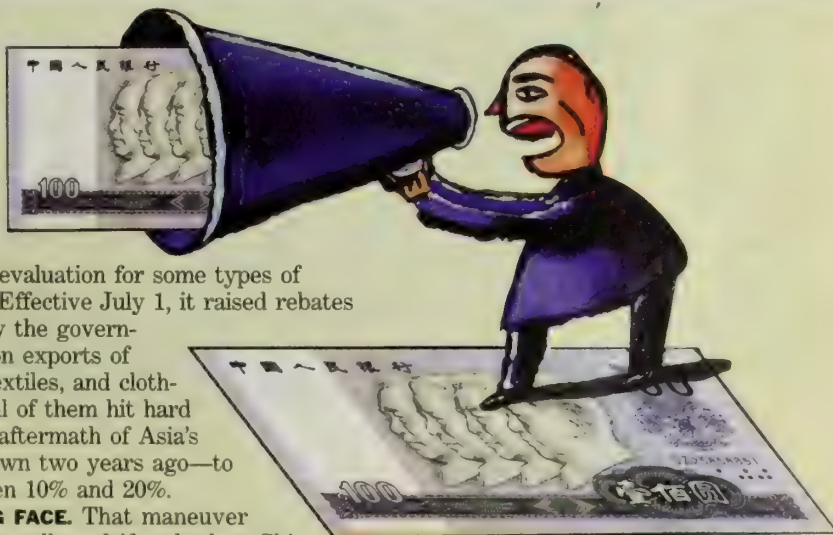
It isn't time to worry just yet about another 1997-scale blowout. There are few signs of another surge in the short-term foreign lending that fed the earlier bubble. Foreign lenders are still smarting from write-offs from corporate failures in Southeast Asia and China.

But it's a big worry for the future. Because banks and regulators still lack risk-management skills, the money that does flow in could again be lent recklessly. Also, most Asian bond markets remain primitive.

Meanwhile, internal politics favor the return of hot money. Politicians facing elections in Korea and Thailand will be tempted to go for any way to pump up growth. In a July talk to Asian central bankers, Koh Yong Guan, managing director of the Singapore Monetary Authority, warned that the risk of another hot-money tsunami is real. "We have short memories—or even no memories," he said. Market rallies fueled by cheap money, half-baked optimism, and lackluster corporate restructuring aren't the ticket for long-term prosperity in Asia.

By Brian Bremner in Tokyo, with Mark Clifford in Hong Kong and Michael Shari in Singapore.

straight month, while in the first half of the year exports tumbled by 10%. The country's trade deficit ballooned a precipitous \$10 billion. Beijing says the economy grew 7% in the first half. But the government is mainly to blame in government spending: When the cash reaches the pockets, it just sticks there. "People still aren't spending," says a diplomat in Beijing. "The government is still spending for months and stave off the crisis." Foreign currency reserves are \$150 billion, and government spending is 10% of gross domestic product. With a larger deficit, we still don't know how to control our debt easily," says a Ministry official. "In the meantime, the country's leaders are looking for new ways to get the economy going again. Policies under consideration include a novel tax on bank deposits to encourage consumers to spend more savings—and a possible salary increase for low-paid state workers. Beijing implemented a de-



facto devaluation for some types of trade. Effective July 1, it raised rebates paid by the government on exports of coal, textiles, and clothing—all of them hit hard in the aftermath of Asia's meltdown two years ago—to between 10% and 20%.

SAVING FACE. That maneuver won't be allowed if and when China joins the World Trade Organization. Yet it involves less loss of face than a devaluation shortly before the 50th anniversary of the People's Republic on Oct. 1. In the runup to the October celebrations, China is intent on avoiding any "action that could be construed as a sign of weakness," says

Arup Raha, economist at Salomon Smith Barney in Singapore.

But after October, devaluation is back on the agenda. And if Beijing has played its cards right, markets will hardly miss a beat.

Roberts covers China's economy.

WASHINGTON



THE NATIONAL DEBT

Reducing the federal debt makes sense. It's good politics, to boot

Suddenly, it seems everyone in Washington is singing the virtues of retiring the national debt. For two decades, as deficits mounted, it was a nonissue. But the prospect of surpluses has economists and policymakers thinking the unthinkable: erasing the \$3.8 trillion pile of federal IOUs held by the public.

Bill Clinton would buy down the debt over 15 years, and even has the blessing of Alan Greenspan. On July 22, the Federal Reserve chairman told the House Banking Committee that cutting the federal debt "is an extraordinarily effective force for good in this economy." On the same day, House Republicans joined in. While they still prefer generous tax cuts, they agreed to tie their across-the-board rate cut to declining interest on the debt.

So why the debt-reduction fever? Clinton sees it as a way to shore up the Social Security and Medicare programs, while blocking huge GOP tax cuts. To Greenspan, it's a ticket to lower interest rates. And to Hill fans, it's proof of fiscal prudence. Besides, paying down debt is a neat way out when politicians deadlock over how to spend the surplus.

GOOD MOVE. The economic argument for debt reduction is clear, say its backers: A sharp drop in the debt would lead to lower interest rates and more business investment, boosting productivity and creating better-paying jobs. Says Assistant Treasury Secretary for Economic Policy David W. Wilcox: "The most pro-growth, pro-saving fiscal policy that we are aware of is debt reduction."

According to an analysis done for *BUSINESS WEEK* by Regional Financial Associates Inc. of West Chester, Pa., wiping out the debt by 2014 would raise the economy's growth rate by more than 0.25% at the end of the 15 years. Bond yields would fall by nearly 1.5 percentage points, and real annual household income would grow by \$1,500. By contrast, RFA figures that the House-passed tax cut would boost GDP by 0.09% by 2014, only a third as much as debt repayment; bond yields would fall by 0.4% and household incomes rise by \$400.

Not everybody buys the rosy scenario. Liberals insist that faster growth also requires public investment. And

erate over the next 15 years to buy bonds. The trust funds would then deem them when the additional cash needed to provide benefits for retiring baby boomers.

BOOMERS TAKE HEED. The argument about how many bonds to buy by Democrats and Republicans have agreed to lock up the \$2.5 trillion Social Security surplus. But what about the extra \$1 trillion from general revenues that supposedly to appear over the next decade? Clinton would use about \$1 billion to buy back even more bonds to stabilize Medicare and help pay for a new drug benefit. Republicans want to fund their \$792 billion tax cut.

The outcome of this debate could have profound consequences for baby boomers and their children. Cutting taxes puts more cash in people's pockets today. But future taxpayers would be stuck with both the current debt and the costs of their parents' Medicare and Social Security. Trimming the debt now forces boomers to defer consumption, but it protects their kids.

But even as debt-reduction fever grows, lawmakers keep finding ways to spend the surplus on everything from better airports to fatter military pensions. The more Congress spends, the less likely the debt will appear in 15 years. True, there's not much magical about erasing the IOUs on a specific timetable. But making sure the debt shrinks to a fraction of their current size still makes more sense than blowing the surplus on big tax cuts or new spending.

By Howard Gleckman and Laurence H. Cohn in Washington

THE DEBT-PAYOFF PAYOFF

(If the debt is retired by 2014)

	BASILINE*	DEBT PAYDOWN
30-YEAR TREASURY BOND YIELD	5.9%	4.5%
REAL GDP GROWTH RATE	2.13%	2.40%
REAL INCOME PER HOUSEHOLD	\$80,100	\$81,500

* Baseline assumes no paying down of the debt

DATA: REGIONAL FINANCIAL ASSOCIATES

conservatives argue that tax cuts would be more effective. Some, such as Lawrence B. Lindsey, a top adviser to GOP Presidential front-runner George W. Bush, fear debt reduction is just a way for Washington to hang on to the money until it finds new ways to spend it.

Paying down the debt is not a simple transaction. Treasury wouldn't just use excess revenues to buy back bonds and retire the paper. Instead, the Social Security and Medicare trust funds would use the \$3 trillion surplus they will gen-

ORTAL COMBAT: CROSOFT VS. AOL

online giants slug it out in the battle for Net supremacy

Long-simmering hostilities between America Online Inc. and Microsoft Corp. went public on July 14, when Microsoft launched a deep incursion into AOL territory by glomming onto "instant messaging," a technology popularized by AOL that lets Web surfers send quick notes to one another. Microsoft's MSN online service announced an instant-messaging setup that not only lets its customers zap notes to one another but also allows them to chat with members. AOL, which has erected a virtual roadblock against the MSN links, says Microsoft's move tantamount to declaring war.

Bigger battles are looming. Microsoft has singled out AOL as its most important rival, and both companies are determined to dominate as computing moves squarely onto the Net. The strategy for both will be to establish powerful Web portals that are tightly linked to their own software "platforms" and Internet services.

THIS WEEK has learned that both titans are quietly preparing such offerings for release next weekend. Microsoft's effort will be spearheaded by Net Service, a new service built around an expanded version of Netcenter, Netscape's Internet portal, sources say. At Microsoft, insiders say, the company is working on ways to link its desktop software to the MSN service and Web portal. Both companies hope these portals will give them the equivalent of steroids—with all the power of software-like services and content—will enable business users and consumers to do all their online chores in one place.

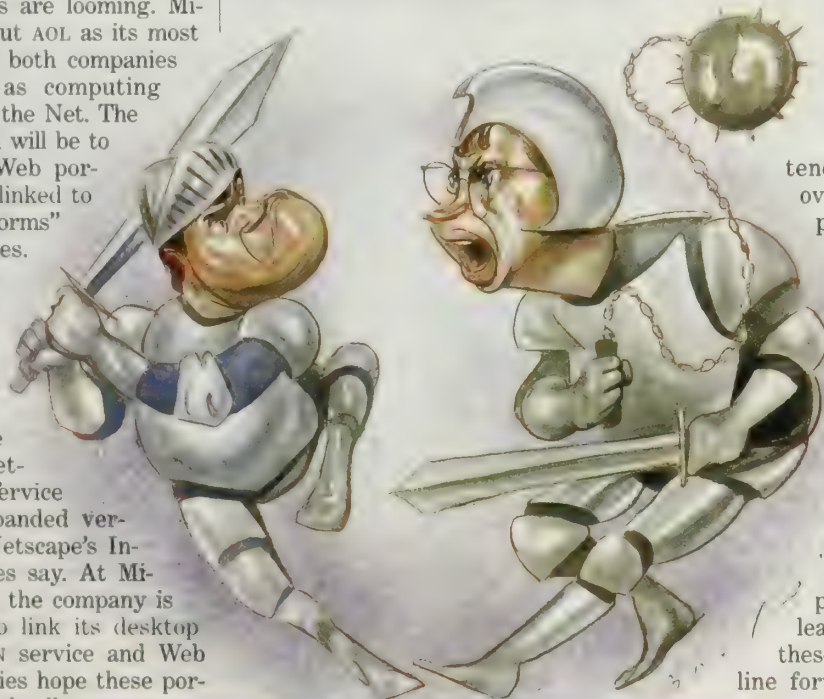
Both companies bring their respective strengths to the fight. Microsoft starts with its near-monopoly in operating PC software as well as ties to capture more business users. Services from Windows will be linked to features of Windows and Office 2000 software, which

are standard equipment on many PCs. AOL, in contrast, hopes to leverage its Netscape brand and browser, already popular among consumers, to reel in more business users. "We don't think the world is looking for just another generic portal," explains Barry M. Schuler, AOL's president of interactive services.

By creating Netscape.com, AOL is creating another new channel in cyberspace—in addition to its core service,

A DUEL FOR DOMINANCE

Both AOL and Microsoft are racing to link software and Net services



CYBERSPACE GLADIATORS

INTERNET ACCESS Microsoft's MSN combines Internet access with a Web portal. AOL's new Netscape.com does the same, for customers who want to bypass the conventional AOL service on their way to the Web.

COMMUNITIES Both Microsoft and AOL want to make it simple for customers to create and join online groups of interest.

INSTANT MESSAGING Almost overnight, instant E-mail has taken off. Both companies plan to weave the technology into their respective browsers and other software.

ONLINE CALENDARS Both Microsoft and AOL are racing to introduce customizable calendars that can be shared by family, friends, and co-workers.

CompuServe, Digital Cities, and iCG, which enables international chat. The latest flavor is aimed at daytime Web surfers who log on from work and at Net aficionados who are too sophisticated for AOL. Netscape.com will be sold with Internet access, giving AOL its splashiest Web brand. Simultaneously, Netscape will release a new browser with direct links to features on the Netcenter portal, such as online shopping and entrée to cyber-meeting halls.

VIRTUAL BAZAAR. The new Netcenter site will benefit from a major makeover. During business hours, the site will be focused on workplace needs. Business users, for example, could use Netscape's new browser to directly connect to new virtual communities that AOL will create, such as a virtual bazaar to sell and exchange goods and services. But after working hours, the site will take on another personality entirely, morphing into a leisure-oriented hangout, drawing on the programming already offered by AOL. "We are trying to provide a

Web service that can help workers manage their business and personal lives in one location," says an AOL executive.

Microsoft, meanwhile, intends to emphasize services over content. Just as the company combined different PC applications to create its popular Office software, it will stitch together several separate Web-based technologies from MSN with features found in Windows and Office 2000. For instance, Microsoft wants to allow users to create virtual communities by combining video and audio clips, chat, E-mail, and Web pages; a Boy Scout troop leader, for example, could use these features to create an online forum to plan a backpacking trip. Like AOL, Microsoft also hopes to create Web-based business marketplaces. "We are going to focus on what we do best, which is integration and applications," says a Microsoft executive. Whatever Microsoft and AOL do, the coming showdown should be a doozy. This is one fight that neither company can afford to lose.

By Michael Moeller in San Mateo, Calif., and Catherine Yang in Washington, D.C.

EXECUTIVE SUITE

FOR TOP TALENT, HOW GREEN IS THE VALLEY

E-commerce sparks a bidding war for CEOs



Some executives are giving "fast track" a whole new meaning. In late June, Joseph Galli, 41, a former Black & Decker Corp. exec, signed an employment pact with PepsiCo Inc. to become chief executive of its Frito-Lay North America snack-foods business. On June 24, Galli met with Pepsi's top executives at corporate headquarters in Purchase, N. Y. He even did a telephone interview

with a reporter to discuss his Pepsi job.

Within hours, however, Galli had a change of heart—and another new job. Galli's lawyers informed Pepsi that night that he was heading not for New York but for Seattle, where he would become president and chief operating officer of Amazon.com Inc. In a line reminiscent of Steven P. Jobs' infamous challenge to Pepsi-Cola President John Sculley years earlier, Spencer Stuart headhunter Norbert A. Gottenberg had asked Galli: "Do you want to be the chips and soda-pop king, or do you want to change the world?"

It was not just that spiel that Galli found irresistible. He was offered a remarkable stock-

option package—sources say as many as 1.5 million shares—plus a board seat and the chance to work closely with Amazon founder Jeffrey P. Bezos.

Score another win for the Net. As the Galli story shows, the furious growth of E-commerce is sparking a bidding frenzy among dot.com companies for top talent. For every America Online Inc. or Amazon.com, there are hundreds of little-known Internet startups scurrying for management smarts and investor credibility. And there are dozens of long-established nontech companies, from AlliedSignal Inc. to J.C.

Penney Co., hunting for E-biz gurus.

Net fever is making star talent searches more difficult than ever. But that's not the only complication. The costs of bringing in outsiders for senior positions—an increasingly popular tack—are soaring. To unlock a top exec from a current employer, a company needs to pay for the now inflated value of his or her unexercisable options. Sources say the buyout to lure Carleton S. Fiorina to Hewlett-Packard Co. as CEO from Lucent Technologies Inc. approached \$50 million to \$70 million. "That is a big number for anybody to swallow," says John T. Hawkins, a managing director of Russell Reynolds Associates. "Some companies are just getting sticker shock."

At the same time, companies have to do what they can to hold on to potential CEOs in their ranks. A spate of mainstream corporations has elevated some of their brightest execs to more visible heir-apparent posts: In the past quarter, Bechtel Dickinson, Cargill, Emerson Electric, PepsiCo, United Technologies, Whirlpool, and Xerox have anointed CEOs-in-waiting. "Many of these ap-

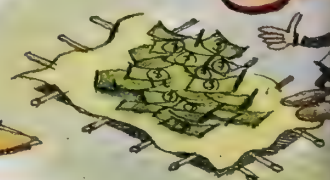
pointments reflect the need to promote homegrown talent," adds Hawkins.

Even the guarantee of the top slot at a major corporation, however, may be enough to keep top talent in place when a hot Internet startup offers a fabulous upside potential. And the demand for management talent in tech businesses seems insatiable. The executive-recruitment firm Heidrick & Struggles Inc. says it did more than 35

commerce searches last year alone. "In one year, E-business became our third-largest practice," says John Strackhouse, managing partner of the firm's E-business group, who is based in Toronto. "Within two years, it will probably represent 25% to 30% of all our business."

CEO COCKTAILS. The frenzy shows no sign of letting up—as long as the startups need the talent and their stock prices remain at lofty valuations. "The tech market had already been heated," says Jeffrey E. Christian, CEO of Christian & Timbers Inc. "E-commerce put it on steroids." Adds Silicon Valley headhunter Lee J. Schweichler: "You can go to a cocktail party these days and get an offer for a CEO job."

The boom, say headhunters, is siphoning off talent that would have gravitated to more mainstream companies only a year or



go. Ashford.com, a net retailer of es, recently hired Cartier Inc. exec with Greenfield as vice-president product merchandising. DoubleClick a Net advertiser, lured Paul kes, associate publisher of Ameri- media Inc., as its director of mar- in May.

ie level of competition and fierce- with which companies are search- at this talent is high," says Lee i, director of corporate recruiting letamor Worldwide Inc., which to spin out an E-biz group and t public by yearend. "You're look-

ing for individuals who come out of larger companies, who know how to run and scale a business and can understand what it's like to manage in a public-company environment."

The allure of the E-biz world to execs steeped in marketing or other nontech disciplines is easy to understand. Most are anxious for the challenge of playing a role in what many see as the new Industrial Revolution. The upside isn't bad, either. Since joining Priceline.com Inc. only a year ago as chairman and CEO, for example, former Citicorp President Richard S. Braddock's stock pack-

age has mushroomed in value to more than \$850 million. No wonder Braddock had little trouble luring a top AT&T official, Daniel H. Schulman, to Priceline in June, as president.

Execs moving into E-biz typically trade cuts in cash pay of between 25% and 50% for three to five times the stock option grants they would normally get in Corporate America. CEOs hired by Internet startups before they go public are usually offered 6% to 10% of the company's equity. It's enough to make someone like Galli burn his bridges at Pepsi.

By John A. Byrne in New York

COMMENTARY

By Christopher Farrell

WOMEN IN THE WORKPLACE: IS PARITY FINALLY IN SIGHT?

When Carleton S. Fiorina was selected to head high-tech behemoth Hewlett-Packard Co., it was duly hailed as a milestone for women. But, let's face it, over the years, there have been other such moments of feminist empowerment—most of which quickly faded. But there is one aspect of Fiorina's appointment that sets it apart and could bode well for the future of gender equality. At least two out of the four finalists for the top job at HP were women. In other words, not only was a woman chosen, but the odds favored it at result.

And the odds are likely to prove. As long as the New Economy's job-creation machine keeps humming away, the ascent of women workers is inevitable. With an unemployment rate around 4.3% and economic growth well above 3%, it becomes impossible for even the most chauvinist male bosses to exclude female employees from his calculations.

NEW ECONOMY SKILLS. It's not just a law of supply and demand at work here. Some credit has to go to the women's movement, affirmative action, and Title IX. But the most important factors propelling women to positions of corporate power are the two giant forces that are shaping the economy itself—rapid technological change and globalization. The retelling New Economy favors workers who excel in manipulating information and solving problems. And, it turns out, the biggest pool of

SHIFT For the first time, women 25 to 35 have more education than their male counterparts. That's starting to have a major impact



workers with that skill set is women.

More important, in coming years, the supply of women with New Economy skills will swell. For the first time, the group of women between the ages of 25 and 35 have more education than their male counterparts, says Anne Stone, a senior research associate at the Women's Research & Education Institute in Washington. Already, a majority of associate, bachelor's, and master's degrees are earned by women, and they're awarded 40% of doctorates. Women make up 46% of entering law school classes and 42% of medical school graduates.

These education advances are showing up at work. In 1998, women

held 46% of executive, administrative, and managerial positions, up from 34% in 1983.

And in an economy where entrepreneurship is exploding, women are starting businesses at twice the rate of men.

PAY GAP. Women are also joining the workforce in record numbers, and more could follow. The female labor-participation rate of those between the ages of 25 and 54 is just over 75%. But the male participation rate for this age group is a bit over 90%. So as more businesses adopt flexible work arrangements, offer more child-care options, and higher pay, that disparity is expected to shrink. "The male and female labor force participation rates do seem to be converging," says Mark Zandi, economist at Chester (Pa.)-based consultant Regional Financial Associates.

Obviously it's not all a

woman's world: A disturbing gender gap in compensation still persists. In 1998, women earned about 76% of men's median pay. And despite the visible success of HP's Fiorina and entrepreneurs such as Meg Whitman of Internet auctioneer eBay, the upper echelons of Silicon Valley and other techdoms are only slowly approaching anything like equal-opportunity zones. Still, as the economy moves into the 21st century, women have reached a critical mass in education. And as long as the economic numbers stay good, so, too, will women's progress.

Farrell writes about economics and finance from Minneapolis.

AUTOS

SMOKE AND MIRRORS AND MILEAGE

How Detroit swerves around fuel-economy standards

By next summer, U.S. mail carriers across the country will be slogging through rain, sleet, and dead of night in new trucks that can run on clean-burning ethanol. It's all part of the U.S. Postal Service's effort to be lean and green. But Ford Motor Co., supplier of the 10,000 vehicles, costing \$20,600 apiece, isn't acting solely out of a desire to score greenie brownie points. Ford also gets a much needed boost toward meeting tough federal fuel-efficiency standards: the Transportation Dept. will credit each truck as getting 50 miles per gallon of ethanol and gas, even if it actually gets less than 20 mpg on pure gasoline in daily use.

With sales of gas-guzzling sport-utility vehicles and pickups soaring, U.S. auto makers are relying on every trick they can to meet federal fuel-economy regulations—at least on paper. One popular gimmick: meeting a current year's target by borrowing credits from future years. But now, the Big Three appear to be running out of tricks for meeting the corporate average fuel economy (CAFE) standards. When the 1998 model year is tallied next spring, they could face fines of \$150 million or more.

LOOPHOLES. Both carmakers and environmental groups have trouble with the rules. Auto makers claim the law, adopted in 1975 when the U.S. was reeling from the Middle East oil embargo, should be changed to reflect the new

reality of lower oil prices and consumers' preference for big pickups and SUVs. "Trying to regulate customers doesn't work," says Ford Chairman William C. Ford. Environmentalists counter that Detroit shouldn't get off easy. "They



SO MANY SUVs
The gas-guzzlers make it hard for Detroit to hit its mileage targets

have vehicles rolling off the line that fail to meet the standard," says Daniel F. Becker, director of the Sierra Club's global-warming and energy program.

The greens want to close loopholes such as the one that Ford used for the ethanol postal trucks. Such "flex-fuel" vehicles, which can burn gas or ethanol, earn big CAFE credits because it is as-

sumed that they will run on ethanol 85% of the time. But with fewer than 200 ethanol filling stations in the country, "damn few" of the 300,000 flex-fuel cars and trucks actually run on ethanol, admits Phillip J. Lampert, project coordinator at the National Ethanol Vehicle Coalition.

Auto makers use lots of other tactics. But it's getting harder to meet the targets, which are 20.7 mpg for trucks and 27.5 mpg for cars. The National Highway Traffic Safety Administration this spring found that General Motors Corp. and DaimlerChrysler flunked mileage standards in the model year. (NHTSA's report cards are always two years behind.) The companies could face \$55 million in fines unless they find a way to boost mileage next year. While NHTSA has yet to issue a report on Ford's '97 fleet, it, too, is expected to find it lacking. And '98 looks no better.

NO CREDIT. Carmakers are in this mess because they've borrowed themselves into a hole. The GM. When average fuel economy for '95 model year trucks fell short of the requirement, the company had until the end of the '98 model year to make up credits to clear its debt. GM did that by declaring in January, 1998, to be the end of the model year for its popular full-size trucks. After a brief setback, it began cranking out similar trucks badged as '99 models. "Until there's something obviously fallacious about a plan, we're pretty much required to approve it," says NHTSA's associate Administrator Robert Shriver. The move bought GM time but put it deeper in debt for the '99 year. GM "may have a little difficulty" complying with CAFE, says GM spokesman Bill Noack.

Why don't the car companies fork over the fines? Detroit worries headlines about huge penalties is bad for public relations. And breaking the law could expose companies to shareholder suits. So Detroit execs have gone to great lengths to avoid fines even as they eke out incremental gains in mileage. "We've been sub-optimizing," laments Albert J. Slechter, director of regulatory affairs for DaimlerChrysler. Sub-optimizing? What he really means is that Detroit, after years of getting by with incompletes, is about to get an

By Lorraine Woellert in Washington and Kathleen Kerwin in Detroit

AUTO MAKERS' BAG OF TRICKS

MODEL YEAR SHUFFLE If an auto maker's fleet won't meet fuel economy minimums for a specific year, a gas-guzzler can have its model year shortened; fuel-sippers may have model years extended.

MAKE MINE ETHANOL Auto makers earn big credits for each "alternative

fuel" vehicle they make, even if they don't reduce gas consumption.

NO CREDIT? BORROW ANYWAY! If a fleet doesn't hit efficiency targets, auto makers can avoid fines by pledging to exceed minimums in future years. The government has never vetoed such a plan.



EBACKS

FROM THE NEW BEETLE —A VW PICKUP?

Volkswagen wants to push the envelope to speed up U.S. profits

most days, taking a test drive of the New Beetle at vw Santa Monica is a waiting game. More than a after bug redux, car buyers still up five deep to get behind the ne, as if queuing for a carnival ride. "an't keep up with the flow," sighs aler Jeff La Plant, who has near-abled his sales staff. "The New e is like a magnet that draws peo-ck to us."

eed, Beetlemania has revived wagen in America. The whimsical e-mobile just keeps picking up —and the rest of the vw lineup is along for the ride. Overall sales German auto maker are up 44.6% U.S. so far this year. Its market which sank below 1% in 1993, is 3.6%. And vw is on track to sell 300,000 cars in the U.S. in 1999—l that Volkswagen has not enjoyed the Nixon Administration. "vw is tely back on the map," says La "We're totally hip again."

AMERICAN ANGST. Groovy. But don't or the return of the psychedelic ierobus next. Instead, think pickup On July 26, vw Chairman Ferdi- Piëch caught his North American tives off guard by making public pe to offer a full-size pickup with e comfort. Company insiders be- hat he has been squiring his fam-ound Germany in a new, smooth- Toyota Tundra, a vehicle that pickups in the direction he wants e vw. Piëch says the pickup can llt on the same chassis as the 2003 sport-utility vehicle vw is devel- with Porsche.

But Piëch's pickup plan is causing transatlantic tension. North American vw execs want Germany to hold off: They fear it could undermine vw's quirky, offbeat image, built around the Beetle, the Passat sedan, and the Jetta compact. A pickup, they argue, would be hard to pitch credibly in vw's humorous "Drivers Wanted" ad campaign. "We have to stay coherent in our image," says Jens Neumann, vw's top North America executive. "We still have to do a lot of thinking and discussing."

Piëch, however, is hungry for the \$10,000-per-vehicle profit that some pickups haul in for Detroit. And with price wars cutting vw's margins in Europe, he is increasingly looking to his booming North America operations, where dealers can command sticker price and above for their popular models. vw's Audi luxury line is also enjoying an American resurgence, with hot models like the TT coupe driving sales up 38.4% this year. "As we move upstream, profit margins are becoming better," says Neumann.

Still, the flow of dollars from America has been small so far. Of vw's \$3.4 billion in pretax profits last year, North America contributed only \$85 million,

or 2.5%. Analysts project that North America could account for 5% to 10% of vw's global profits this year. "It's nice to have," says analyst Greg Melich of Morgan Stanley Dean Witter. "But it's not a whole lot."

BEAT BENZ. Piëch wants North America to be a whole lot more. He has set a target of 500,000 sales for vw and Audi by 2003—double 1998's sales and near vw's record of 569,000 in 1971. U.S. execs are confident. "We'll do that before 2003," predicts Frank Maguire, vice-president of sales for vw of America.

Still, the greatest challenge for vw is Piëch's desire to pit the brand directly against Mercedes-Benz. In Europe, where taxicabs are Mercedes and vw is upscale, that may be reasonable, analysts say. In the U.S., however, Mer-

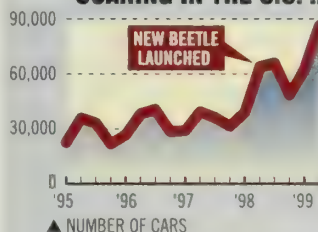
cedes floats at the top of the automotive food chain, with vw several leagues below. Even so, vw's sport-ute is expected to be priced close to Mercedes' M-class in the \$35,000 to \$40,000 range. And in 2001, vw is coming up with a \$40,000 luxury car. "Going after Mercedes could come at the expense of Audi," warns auto analyst Lincoln Merrihew of Standard & Poor's DRI.

For now, vw dealer La Plant, who has seen sales double in the last three years, mainly worries about getting enough inventory. "More products means more

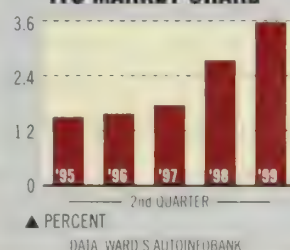
dough," he gushes. The Beetle, Passat, and Jetta put vw back on the road to prosperity in the U.S. Now the question is: Can a pickup haul in even more buyers?

By Keith Naughton in Detroit, with Karen Lowry Miller in Frankfurt

VW SALES ARE SOARING IN THE U.S. ...



... MORE THAN DOUBLING ITS MARKET SHARE



TELEVISION

HERE'S THE NEXT 'NEXT BIG THING'

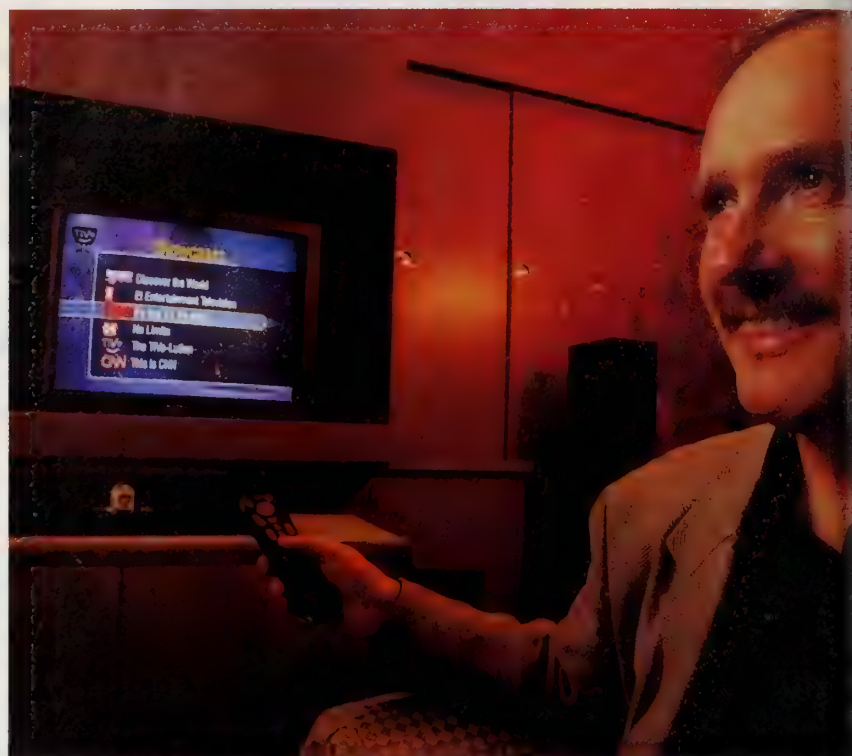
TiVo's gadget makes your TV interactive—in a primitive way

On July 27, a tiny startup called TiVo Inc. announced that it had lined up support from CBS, Walt Disney, cable operator Comcast, cable programmer Liberty Media, and others. Their commitment—\$32 million—wasn't a grabber. But coming on the heels of deals worth \$40 million with such giants as satellite-TV leader DirecTV, Philips Electronics, and NBC, the effect was to give TiVo a big push toward becoming a leader in the race to convert television from a one-way affair into an Internet-age interactive medium. What's more, TiVo President and CEO Michael Ramsay plans to raise \$80 million with an initial public offering in September.

For now, TiVo, and its major rival, Replay Networks Inc., offer what amounts to smart VCRs. Every night, TiVo boxes connected to TV sets download a programming guide via telephone lines and seek out the shows they know their owners like to watch. And with favorite shows automatically recorded digitally, couch potatoes can now tune-in to must-see TV whenever they feel like it.

TO ZAP OR NOT? But why are the three biggest TV networks buying into the "personal-TV" vision—which would seem to threaten their empires built on ads? After all, TiVo viewers can easily fast-forward through those costly 60-second spots that national advertisers buy. NBC Cable President Tom Rogers, a TiVo director, says the Peacock Network agreed to back TiVo because its machine lacks the "zapping" button that the Replay box uses to eliminate ads altogether. More important, NBC is interested in the possibilities of freeing popular programming such as *Friends* from its once-a-week time slot—and eventually using the interactive technology to customize advertising for the new audience. "I don't think of this as a potential enemy," Rogers says. "This is a friend."

How big is the opportunity? Sean Badding, television analyst with the Carmel Group, calls personal-TV devices "the next big thing" and predicts that 220,000 will be sold this year. That includes Echostar's DISHplayer, which combines satellite TV and a rudimentary



BIG FRIENDS: Ramsay has lined up support from the likes of CBS and Disney

computer hard drive. By the end of next year, Carmel Group, which analyzes the industry, expects nearly 900,000 couch potatoes will be enjoying personal-TV services, ramping up to over 10 million households by 2005, when prices are expected have fallen from about \$500 now to the \$150 range.

Replay, meanwhile, is hardly throwing in the towel. It has its own roster of supporters, including Japan's Matsushita. Replay CEO Anthony Wood expects to announce after Aug. 2 a \$65 million investment syndicate and "major strategic alliances" that include "some of the largest media companies in the world," including a few that previously have put money into TiVo. Joachim Kiener, chairman and CEO of TV Guide Inc., says that his company's "minimal" investment in TiVo is nonexclusive and that his company has also talked with Replay.

The key to the future for both companies is moving beyond the digital VCR to interactivity. On TiVo, viewers can actually teach the box their preferences by pressing "thumbs-up" and "thumbs-down" buttons while watching. That helps the system customize program-

ming—and also gives advertisers data for customized advertising.

Replay, on the other hand, is betting on "couch commerce," interactive answer to E-commerce. Starting next year, viewers intrigued by a commercial will be able to punch a button on the remote to make a purchase or request more information by mail.

COSTLY BOXES. Are consumers ready for another gadget to put on top of

TV? Maybe not. Now, prices are steep; low-end models run upward of \$500, plus TiVo charges a \$10 monthly service fee. Replay charges such fees, but its low-end model costs nearly \$700.

core technology

from both companies, however, can be built into other devices, including digital set-top cable boxes or DVD players even into the cable system. Already, DirecTV plans to begin marketing a TiVo-enabled satellite box this fall. "All these companies are going to ultimately have to figure out what their hardware strategies are going to be," says Kiener. Then, perhaps, interactive TV will move from being a concept to being a market.

By Janet Rae-Dupree in Sunnyvale, Calif., and Richard Siklos in New York

TiVo can analyze viewers' tastes and then use the data to customize advertising



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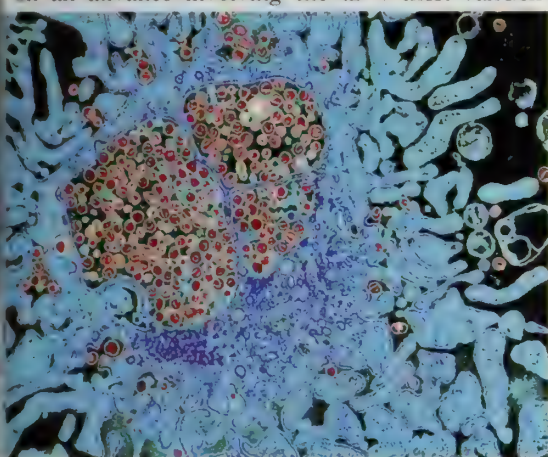
RMACEUTICALS

OSING IN ON HIV VACCINE?

panies will test methods that could nip infection in the bud

1987, a team of researchers at Merck & Co. joined the hunt for a vaccine to stop the spread of AIDS. In the years, most of Merck's efforts, like those at other pharmaceutical labs, led to disappointment. But Dr. Emilio Emini, vice-president in charge of Merck's efforts, gave up hope.

Now, that perseverance may be paying off. Merck is preparing to enter human testing by year-end with an AIDS vaccine based on an advance involving the di-



rect injection of HIV DNA. But it is unlikely to prove a final solution, experts believe. The Merck vaccine is part of a key biotech build-out in the effort to come up with one. "This is an experimental period," says Emini. "We have the tools, and you have the questions to ask."

RING AHEAD. Certainly, there are a lot of hurdles between Merck's lab work and a commercial vaccine. For one thing, what appears promising in animal studies often does not hold up in humans. Emini also warns that Merck's current candidate will most likely need to be tested as testing progresses. But the Merck project—and others under way at companies such as Alkermes Human Vaccines Inc., which is set to enter human testing with its vaccine at the end of 2000—are changing the outlook for development of a vaccine. The current experimental models rely on a similar approach: delivering certain HIV genes to human cells.

Those genes then trigger the production of certain proteins found in HIV. The hope is that once the body's disease-fighting T-cells see those proteins, they can ready their weapons. After that, if the virus actually invades, T-cells can quickly wipe out any infected cells. This is a switch from earlier approaches, which relied on stimulating antibodies to attack HIV before it invaded cells. And the antibody approach has not been ruled out yet, either: VaxGen Inc. is in final human testing of such a vaccine.

COMBO ZAP. Researchers are looking at delivering the gene-based vaccines in two ways—by directly injecting "naked" HIV DNA or by inserting the genes into a harmless virus that carries them into the body's cells. For instance, with the vaccine being tested by Pasteur Mérieux Connaught, a unit of Rhône-Poulenc Group, HIV genes are delivered using a specially-modified canary-pox virus. Meanwhile, Merck scientists have data showing major strides in stimulating an immune response in monkeys using "naked" DNA vaccines. That could be critical, since most experts expect that a combination of approaches will work best.

INSIDE HIV
Genes for vaccines can be delivered as "naked" DNA or by having a harmless virus carry them into cells

It could take years of trial and error before it is clear what works. And these efforts could ultimately be trumped by the virus' ability to adapt. But even if a vaccine doesn't protect completely against HIV infection, it may be able to suppress the virus enough to hamper its spread. If that occurs, says Dr. Gary J. Nabel, director of the new Vaccine Research Center at the National Institutes of Health: "In parts of Africa and Asia... we will be able to reduce the exponential spread of the virus." That alone would be a major victory in this costly and tragic war.

By Amy Barrett in Philadelphia and John Carey in Washington, with Heidi Dawley in London

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EDITED BY KELLEY HOLLAND

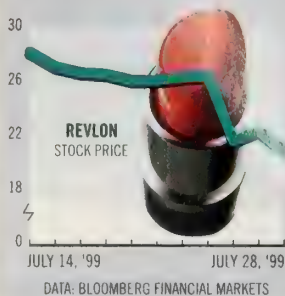
eMACHINES: IN COMPAQ'S SIGHTS

IF YOU CAN'T BEAT 'EM, SUE 'em. Upstart eMachines has been a thorn in the side of the computer Establishment since its November debut. Selling PCs for as low as \$399 (and supplying Internet service providers that give them away), eMachines has moved nearly 1 million units. That made it No.3 in home PC sales in June, says research firm PC Data. Now, No.1 Compaq is fighting back on two fronts. On July 21, Compaq cut the price of its Presario 5304 by \$100, to \$499. Then on July 26, it sued eMachines for allegedly violating 13 Compaq patents. A Compaq win could force eMachines to pay hefty licensing

CLOSING BELL

RED-FACED

The sweet smell of success eludes Revlon. Its stock jumped earlier this year when news broke that German perfumer Coty might buy the debt-laden cosmetics maker. But on July 26, reports came that Coty—leery that Revlon lacked global brands—was backing off. Revlon's stock tumbled nearly 25%, to 21½, and settled at 20½ two days later. Revlon quickly said it has other suitors. Among them, say sources, are Johnson & Johnson and Estée Lauder, neither of which would comment.



fees that would be hard to support on its 8% to 9% gross margin. The suit also could push back an initial public offering that had been expected by early August. Meanwhile, on July 28, Compaq announced a \$134 million loss and a 12% layoff.

A CABLE GUY TAKES A BREATHER...

ANOTHER MONTH, ANOTHER billion-dollar cable deal. Cox Communications said on July 27 that it will pay Gannett \$2.7 billion in cash for cable properties serving more than 520,000 customers in Oklahoma, Kansas, and North Carolina. The deal—the fourth in as many months for Atlanta-based Cox—will bring its cable customer base to 6 million, making it No.5 in the country. But don't hold your breath for another blockbuster acquisition. Cox chief Jim Robbins says 6 million customers is enough for now. The company will focus on consolidating its gains.

... BUT ANOTHER KEEPS SHOPPING

WHILE COX SAYS IT MAY TAKE a breather, mega-investor Paul Allen may be accelerating his cable dealing. On July 28, his Charter Communications cable-TV company filed to raise \$3.45 billion in an initial public offering. That gives Allen a powerful vehicle for continuing his run of cable acquisitions. Since his purchase of Charter for \$4.5 billion closed in January, Allen has bought 12 cable companies for more than \$10 billion—making Charter the fourth-largest cable TV operator in the country. Don't worry about Allen running out of money: The Microsoft co-founder still has \$24 billion in the software giant's stock.

HEADLINER: GARY WENDT

A CAPITAL EXERCISE

Gary Wendt, the highflier behind GE Capital who abruptly resigned in December, has resurfaced.

He and several partners plan a private-equity investment fund that could raise as much as \$3 billion. The group, which will include Paul Street, a former senior vice-president at GE Capital, is expected to split its stake between Europe and Japan. Wendt, 57, could not be reached for comment, but in a written statement he said the fund "will not focus on highly leveraged investments and will stress operating management—not



simply financial acumen

Wendt is known for his own financial acumen, having built GE's financial arm to \$4 billion from \$300 million during his 12-year stint as head. But he gained notoriety from his high-profile divorce, in which his wife, Lorna, fought for half of his stock options and assets as compensation for years spent helping him climb the corporate ladder. Wendt quit GE Capital in December, after it became clear that CEO Jack Welch would not consider him a successor.

By Diane Brady
Greenwich, Conn.

BEVERLY: BRACING FOR A BIG FINE?

THE NATION'S LARGEST nursing-home chain, Beverly Enterprises, reached a settlement on July 27 to end a Justice Dept. probe of alleged Medicare fraud. The Fort Smith (Ark.) company, which operates 563 nursing homes, was being investigated for allegedly inflating bills covering nursing services. Beverly also said it would take a second-quarter pretax charge of \$175 million to \$225 million, equal to its total earnings for the last eight years. Had it been found guilty, Beverly could have been banned from Medicare for five years.

A FLU DRUG GETS THE FDA'S O.K.—BARELY

NEXT YEAR, MAYBE A LITTLE less flu? The Food & Drug Administration on July 27

approved the first of a class of drugs that curb flu virus by attacking an enzyme it needs to spread. But Glaxo Wellcome's Relenza is no miracle medicine. Clinical trials showed that the drug might reduce the typical seven-day period of illness by a day or so. The FDA's advisory committee recommended approval because it did provide enough benefits similar drugs in the pipeline may be more effective.

ET CETERA...

- Paul Maritz will step down as vice-president of Microsoft's development group.
- The Conference Board reported its June consumer confidence index dropped.
- Intel will roll out the 400-MHz Pentium III chip, along with a 500-MHz Celeron.
- IBM unveiled its S/390 server, renewing its storage push.

BY PAULA DWYER

CLINTON'S GAME: SUE BIG TOBACCO AND BURN THE GOP

aking good on a vow in President Clinton's State of the Union address, the Justice Dept. is readying a lawsuit that seeks to recoup billions of federal tax dollars spent treating smoking-related illnesses. And as Hill Republicans, by a broad-based business coalition, try to head off the president Clinton is planning to raise the political stakes by making a very public fight with GOP lawmakers and their allies.

As little as a year ago that Justice decided it lacked the basis for a suit. Although some agency officials rewaried, that position shifted in November after tobacco companies agreed to pay \$246 billion to settle state Medicaid claims. With White House aides pushing Justice to press on, a team of 15 attorneys is struggling to put together a lawsuit seeking to recover funds spent to care for the elderly, disabled, active military personnel, and veterans for diseases linked by smoking.

NO SQUEEZE. A credible suit is not Clinton's only problem. GOP Sen. Judd Gregg of New Hampshire and Sen. Mitch McConnell of Kentucky initially agreed to ban Justice from using any of its money for the effort. That effort was scuttled, but Senate Republicans did resist the request for an extra \$20 million to finance the litigation. A House spending bill is expected to do the same. Legal insiders say it will be hard to squeeze enough money out of an already tight budget to pay for what could be prolonged litigation. So Clinton plans to fight for new funds. The Senate and House spending bills go to conference. In the battle the suit, the tobacco industry has signed up a coalition of business groups. Their rallying cry: If Clinton can attack tobacco with the threat of huge judgments, it can attack any industry. The U.S. Dept. of Commerce, chemical makers, and even con-

venience-store owners who sell tobacco products are buttonholing lawmakers. Besides opposing the tobacco suit, the group is pushing a separate McConnell measure that would limit the government's right to seek damages on behalf of the injured. "The notion that this is about tobacco is just false," says James A. Anderson Jr., vice-president of the National Association of Wholesaler-Distributors. "Everyone is at risk."

Business' concerns can't easily be dismissed. Senators Jack Reed (D-R.I.) and Robert G. Torricelli (D-N.J.) are working on a bill to make it easier for the feds to sue lead-paint makers. They aim to recover the government's lead-related medical and education expenses, plus the cost of lead removal.

UNDETERRED. If Justice sidesteps the land mines in Congress, other problems loom. Legal experts think any assault on tobacco will cite the 1962 Medical Care Recovery Act. That law, originally meant to help military personnel, lets Washington recover medical expenses if injuries are caused by a third party.

But the law's premise has never been extended to a Medicare case. Nor have the feds used it to seek damages from an entire industry or to combine thousands of claims. "Even though we expect to win, the kind of clout and resources that the government can bring to bear is something we have to take seriously," says Kenneth J. Parsigian, a Boston litigator who represents Philip Morris Cos.

So far, the lawsuit's lobbying and legal roadblocks haven't deterred the White House. It is already making hay by picking preemption fights with the GOP over gun control, HMOs, and tax cuts. Considering the political benefits of opposing Big Tobacco, don't expect Clinton to back off—even if the feds never recover a dime.

By Susan B. Garland



SENIOR SMOKE: A legal test ahead

CAPITAL WRAPUP

RE: CUT MIDDLE-CLASS TAXES

ice-President Al Gore is about to join the tax-cut bandwagon. On July 30 in Minneapolis, Gore is expected to endorse tax breaks for health care and education. Gore's cuts target the middle class. He'll contrast his proposal with the \$792 billion GOP plan that benefits mostly wealthy taxpayers. Gore blasted the GOP plan at a July 27 Capitol Hill rally as a "huge, gigantic, ugly tax scheme." The speech will be the first of a series on how the Veep would address the "innovation economy."

REVENGE OF THE LAWYERS

► It's payback time for the Association of Trial Lawyers of America, one of the Democratic Party's top donors. The ATLA is furious with Clinton and Gore over the last-minute decision to sign a GOP bill curbing lawsuits that stem from Year 2000 computer glitches. Now, it plans to steer more of its largesse to House Democrats and less to the Democratic National Committee, which has closer ties to the White House. In the '98 elections, the trial lawyers gave Dems \$4 million.

YOU'VE GOT CONGRESSIONAL MAIL

► Lawmakers soon may be bombarding their constituents with E-mail. In late July, the House Administration Committee approved the use of the franking privilege, which lets lawmakers send free mail, to pay for online commercials. The first member of Congress to take the plunge may be Representative William M. Thomas (R-Calif.), who is talking to such companies as eCommercial.com Inc. in Aliso Viejo, Calif., about producing online mailings. Now, where's that delete button?

BRITAIN

THE YANK WHO'S KING OF BRITISH CABLE

Barclay Knapp may be looking for prey on the Continent

He may not be as well known as other communications impresarios such as John C. Malone or Craig O. McCaw. But Barclay Knapp, a soft-spoken American telecom entrepreneur, is well on his way to becoming Britain's king of cable. Knapp, the president and CEO of Nasdaq-listed NTL Inc., agreed to acquire the residential cable operations of Cable & Wireless Communications (CWC), a subsidiary of Cable & Wireless PLC, for \$13.1 billion on July 26.

It was a financial coup. Knapp snatched CWC from under the nose of Telewest Communications, which had been talking with CWC since April. He also enlisted the help of France Télécom, which is putting up \$5.5 billion in exchange for 25% of NTL. The CWC purchase will make NTL the top cable operator in Britain, with 2.8 million customers and almost two-thirds of the urban market.

Capturing Britain is just step one in Knapp's European playbook. He plans to take his successful formula of cheap bundled TV and telephone services across the English Channel, possibly in partnership with France Télécom or even Microsoft Corp. Analysts speculate that NTL could link up with United Pan-Europe Communications, a major continental cable player in which Microsoft has a 7.8% stake.

NTL and Microsoft already have ties. Microsoft holds a 5% stake in NTL, as well as 30% of NTL's main rival, Telewest. Now, analysts say, NTL may eventually swallow Telewest as well, giving NTL about 85%

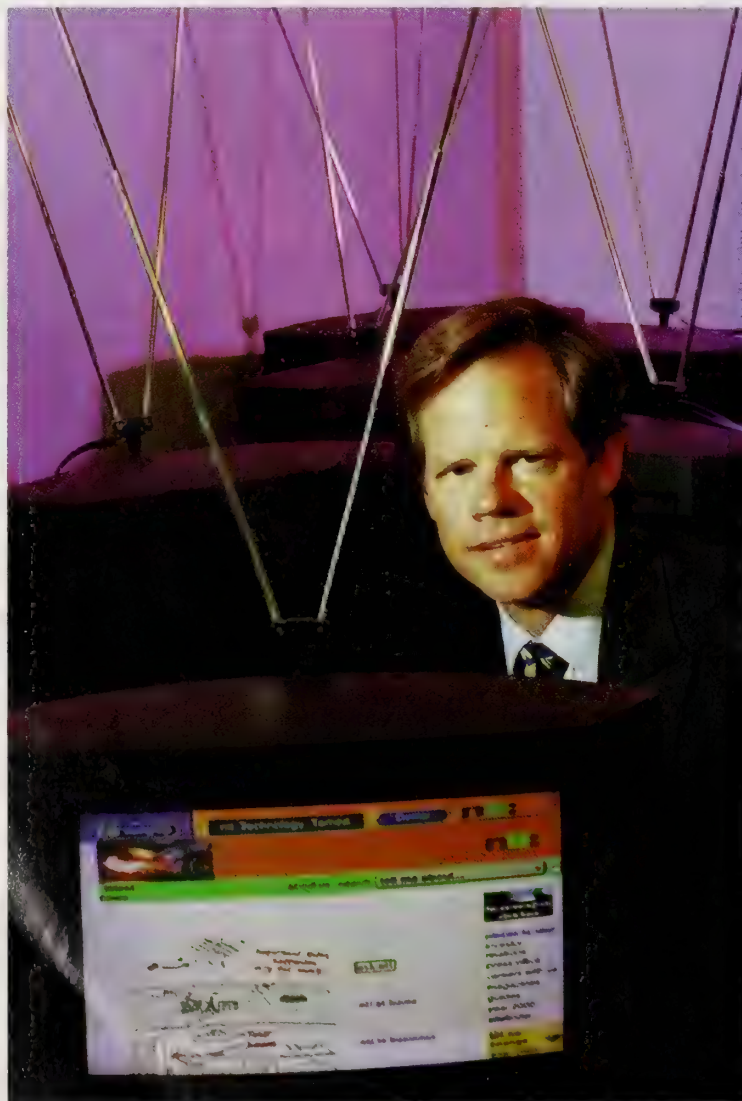
of the British market. Knapp wants that. So does Microsoft, say analysts. Microsoft executives were not available for comment.

AN OPENING. The inability of Telewest to pull the trigger on the CWC deal gave Knapp, whose NTL once seemed the weaker company, an opening. Besides Microsoft, Telewest's other main shareholder is John Malone's Liberty Media Group. "Knapp moved quickly and in a

way that gave us a better deal," says Graham Wallace, CEO of Cable & Wireless. Indeed, Knapp's ability to persuade France Télécom to invest in NTL helped clinch the sale. Knapp's advisers Morgan Stanley Dean Witter may arrange the other \$3 billion in financing.

Why has Knapp emerged as a strong man in Britain when powerful players such as Liberty and Bell Atlantic Corp. have been less effective? Knapp's admirers say his genius has been in figuring out that the British cable game was just as much about pay services as it was about entertainment. His low-cost cable and telephone packages have helped NTL achieve a higher market penetration than its rivals. It also helped his cause by buying a broadcast transmission business, which brought him the NTL name in 1990 for \$376 million. That gave Knapp a profitable business to offset capital-consuming cable.

Looking surprisingly relaxed, Knapp



BARCLAY KNAPP: AMERICAN INVADER

TITLE President and CEO of NTL, soon to be Britain's No. 1 cable operator.

BORN 1957 in Goosebay, Labrador.

EDUCATION BA in mathematics from Johns Hopkins; Harvard MBA.

FIRST JOB Worked on cruise missile guidance systems for Planning Research in Virginia.

FIRST HIT Co-founder of Cellular Communications. Sold to Airtouch for \$2.5 billion in 1996.

OTHER COMPANIES President and CEO of Cellular Communications of Puerto Rico and CoreComm, Nasdaq-listed U.S. business telecom and Internet service provider.

DATA: NTL, BUSINESS WEEK

etched out his vision of the communications future at NTL's London office expects NTL to become a dominant force in Britain using its off-the-art cable to pipe pay-TV and internet service to both television and computers. NTL is beginning to promote connections for its customers and preparing to launch a digital interactive system in October. He stresses that because much of the cable is newly laid and highly, the region has great potential for broadband or high-speed network. "Europe has a chance to pull out perhaps ahead of the U.S. in the use of broadband," he says.

A RECORD. Knapp has an impressive record. He started out in the telephone in 1981 helping a group that included George S. Blumenthal, now NTL's chairman, found Cellular Communications, an early U.S. mobile phone provider. That business was sold to Air Communications Inc. for \$2.5 billion in 1986. Knapp is wrapping up a deal to acquire another company, Cellular Communications of Puerto Rico, for \$814 million from SBC Communications Inc. and Telefonos de México. Richard Reiss Jr., chairman of Georgica Advisors, a New York investment partnership, estimates Knapp's businesses have produced an average 35% compound annual return since the mid-1980s. Knapp has also done well for himself. He has about 3 million shares in NTL, which are trading at about \$10 on Nasdaq.

Being the king of cable doesn't mean Knapp is home free. NTL, like most other cable businesses, loses money. It reported an operating loss of \$121 million on revenues of \$268 million for the year ended March 31, 1999. Last year the company had operating losses of \$28 million on revenues of \$747 million. In a recent Securities & Exchange Commission filing, the company warned it faces capital costs and debt service of \$1.1 billion for the rest of 1999. And, Knapp has paid a fat price for the company. Some observers think that the company's inner is Cable & Wireless, which has sole control of cwc's long-distance business.

Now, NTL has to deal with such formidable competitors as British Sky Broadcasting and British Telecommunications PLC, which are sharpening their own services. Having such heavyweights around is one reason British regulators may permit the cable industry to consolidate down to just one company, analysts say. Knapp is the least likely of the great telecom entrepreneurs. Now, he has the chance to prove that—for better or worse.

By Stanley Reed
in London

COMMENTARY

By Gail Edmondson

FRANCE: A CEO'S PAY SHOULDN'T BE A SECRET

Marc Viénot has forged a successful second career as the conscience of France's corporate elite. Four years ago, the ex-chairman and CEO of Société Générale helped France emerge from a series of corporate scandals by heading a commission to craft guidelines on corporate governance. Much to everyone's surprise, French companies followed Viénot's recommendations. By nominating in-

The French still think it's noble to inherit a fortune and dirty to earn one. By going public with their pay, CEOs would force French society to confront its schizophrenic feelings about wealth. Equating pay with performance instead of shame would help create a more entrepreneurial class of managers. It would reward executives for achievement rather than attending the right school. "Pay transparency would create a virtuous circle. It would establish an incentive to perform," says one French investment banker.

A few CEOs have been brave. AXA's Claude

Bébéar, who earned \$2.5 million in salary and bonuses last year, has been publishing his salary, bonus, and stock options since the company listed on the New York Stock Exchange in 1996. He is among a handful of French executives

whose compensation, including stock options, is commensurate with that of U.S. and British CEOs. By contrast, CEOs of France's 40 largest companies earn up to 50% less than their American and British counterparts, consultants say. "They should reveal their pay to get paid more competitively," says an executive at a U.S. investment bank in Paris.

That's still radical thinking in France, the last remaining Western country where the Communist Party is part of the government and capitalists are vilified by leftists. That's why Viénot's committee is afraid to recommend disclosure of CEO pay.

And that's why it should. With technology and a common currency driving tumultuous change in Europe, it wouldn't take much to topple the *ancien régime*. A new generation of achievers is waiting in the wings—and watching for a signal from Viénot. *Bon courage.*

Paris Bureau Chief Edmondson covers management issues.



dependent board members, the companies took a much-needed step toward breaking up France Inc.'s old-boy network, which granted CEOs rubber-stamp approvals and left shareholders holding the bill for management's misdeeds.

Now, Viénot is dropping the ball. He flinched uncomfortably during a press conference on July 22 when asked why he failed to recommend in a new report that executive pay be disclosed in annual reports. His response: Revealing it would just help rivals lure French CEOs away with better pay packages. He also quipped that Americans like bragging about their pay, and the French don't.

That undercuts the good work done by the committee to date. Shareholders deserve to know the compensation of top executives and how much of it is performance-related. And there is an even more compelling reason to go public with the numbers: to puncture the prevailing French attitude about money.



EUROPE

SPRINGTIME IN EUROPE AT LAST?

But tough reforms are needed to lock in growth

All winter and spring, Europe's business leaders fretted. Germany's economy was in the doldrums. Italy couldn't control its public spending. And the euro was plunging close to parity with the dollar only six months after its debut. Now, suddenly, the clouds seem to be lifting. The euro has been advancing since July 13, rising from \$1.01 to \$1.07 on July 27, before falling back a bit. And business confidence in both France and Germany jumped. "We're at a turning point," says Jürgen Ratzinger, economist at German electronics giant Siemens. "The mood is one of an upswing."

It's about time. The 11-nation euro zone grew a mere 0.2% in both the fourth quarter of 1998 and first quarter of 1999, dragged down by a shrinking German economy. But now the region

seems set for growth of 2% for 1999—and a hotter pace in 2000 (table). Rising export orders in Germany and Italy, which represent half of the euro zone economy, mean output will be picking up, especially in auto and machinery plants.

That surge in exports will add momentum to an upturn driven by consumer spending in the faster-growing economies. Spaniards and Dutch are buying cars; Finns and Irish are taking out mortgages for new homes. George Magnus, chief economist with Warburg Dillon Read in London, says domestic demand in the euro zone began growing in late 1998 at an annualized rate of 3%. Now, even the Germans are joining the party. Deutsche Bank estimates that German consumer spending will rise 3.5% this year as higher wages combine with nearly nonexistent inflation to raise real disposable income.

The brighter economic prospects are reflected in the recent upturn in the

On the Rebound

GDP Change Year to Year

	1998	1999F	2000F
EURO ZONE	2.7%	2.0%	2.8%
GERMANY	2.3	1.6	2.7
FRANCE	3.2	2.3	2.7
ITALY	1.3	1.1	2.3

DATA: DEUTSCHE BANK

euro. European Central Bank President Wim Duisenberg also helped strengthen the currency by declaring that the is now inclined to raise, rather than lower, rates. The hint was enough to convince currency traders that a recovery was real and that it was time to quit dumping euros. Fortunately, European inflation is hovering at 0.6%—below the ECB policy limit of 2%.

As Europe-wide growth turns the corner, the equity markets may be in for a more exciting ride, too. Many investors have avoided Europe recently because their stock-price gains were offset by currency losses. Now, a stronger euro could lure investors back. A healthier economy should also translate into higher stock prices as corporate profits head north. Mark Howdle, equity strategist for Salomon Smith Barney in London, expects 1999 earnings per share to climb 9% in the euro zone. Other analysts think investors may wait on the sidelines until they're convinced the euro's bounceback is real. "The euro recovery is fairly embryonic," says David Bowers, European equity strategist at Merrill Lynch Global Securities in London. "We're still looking for a trigger to buy Europe rather than the U.S."

RIGHT NOISES. Meanwhile, politicians are providing a boost to business morale as the economy picks up. No recovery, however, if governments of the big states—Germany, Italy, and France—don't follow through with tough labor tax, and social welfare reforms. At least German Chancellor Gerhard Schröder finally seems to be making right noises. He and new Finance Minister Hans Eichel want to cut \$16 billion off Germany's budget deficit next year and balance the budget by 2006. They aim to slash the corporate tax burden, including national and state taxes, by 37% by 2001, from 56%. And in July, Economics Minister Werner Müller called for private pensions, labor market flexibility, and the reduction of state spending from 48% to 40% of gross domestic product.

All these proposals are winning Schröder new support from the business community. "He is moving in the right direction," says Klaus-Jürgen Schmieder, chief financial officer at drugmaker Hoechst. But it's crucial that Schröder and his counterparts across the euro zone use the good time to take measures for deflating the welfare state. "They have to follow through on their promises," says Siemens' Ratzinger. If not, the European recovery will fade as just another cyclical blip.

By Karen Lowry Miller in Frankfurt

MISSION: When Bank of America invested in new technology, they knew success required that people could use it. But how? Traditional training was too slow; hiring new employees too expensive. Lockheed Martin's solution: a business-smart process called reskilling. It uses real projects to teach new skills, guided by experienced coaches.

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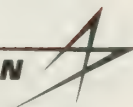
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JAPAN

NO ROOM AT THE TOP

As companies restructure, older managers lose their jobs

Masayuki Otsuka has had a classic career at Nippon Steel Corp. After 30 years in the Tokyo headquarters of the world's No. 2 steelmaker, he moved to a subsidiary to make way for younger managers. Then he shifted to a small affiliate of the subsidiary. Now 60, Otsuka advises recruits, and he has some surprising things to say about the career path he followed. "I tell them to develop skills they can take with them if they leave the company," Otsuka says. "Transferring employees to subsidiaries no longer solves problems."

Sound counsel. Japanese corporations are closing their countless subsidiaries at a record rate. And the closings are hitting older managers such as Otsuka especially hard. For decades, those who didn't reach the top were parked in affiliates—where they might be no more than "window sitters." Now, the lifetime-employment system is crumbling as companies strengthen balance sheets and focus on core strengths.

The trend signals the wrenching change Japan faces after an eight-year recession. It also suggests the pain many Japanese will suffer: older managers as they are forced from sinecures, younger ones as they confront dashed hopes for secure careers. Schroders Japan Ltd. estimates that restructuring could push unemployment to a record 5% this year from 4.1% in 1998. **U.S. MODEL.** As Japanese companies chip away at their seniority-based management system, they are forcing executives to perform or go—and bringing Japan a little closer to the U.S. model. "The move is gradual," cautions Koichi Hori, representative director of Boston Consulting Group in Tokyo. "It's not easy to fire people."

But the pressure is fierce. Recent surveys show that almost one listed company in eight intends to close subsidiaries or leave them to their own devices. Mitsubishi Electric, retail chain Daiei, Toyo Tire & Rubber, Mitsui Chemicals, and Sumitomo Corp. plan cuts (table). Itochu Corp., the blue-chip

trading company, will cut a third 1,027 worldwide subsidiaries in the two years. "Only 62% of our companies are profit-making," says Sumitaka Ta, a senior managing director. "If a company doesn't make money, we close it."

LUXURY LOST. That's a drastic change in attitude. Vast and often wasteful affiliate networks have been a key part of Japan's full-employment system. At the height of the late-1980s bubble, Nippon Steel had one unit that grew mushroomed into another making semiconductors. But the system they sustained, these subsidiaries are now unaffordable luxuries.

Trimming down will be a tricky business. Many subsidiaries are run by the ex-bosses of rising companies in their parent companies who are reluctant to let go of former patrons. "It's not easy if the president of the parent decides on a drastic change," says Ryoji Ito, director of consultants Bain & Japan.

Still, the generation taking control has little choice but to shrink its employment. While there is no sure of the hidden employment among Japanese executives, Schroders estimates that joblessness must exceed 10% for Japanese companies to return to 1990 profitability levels. Lots of pain is inevitable.

But companies will also have to overhaul pay and promotion to reward performance instead of lifetime loyalty. "This is the only way to boost productivity and turn on capital over the long run," Kathy Matsui, strategist at Goldman Sachs (Japan) Ltd.

Some subsidiaries may manage to stand alone. Nippon Telegraph & Telephone Corp. spun off its mobile-phone unit as NTT Do Co Mo five years ago. Its stock price is now higher than the former parent's. But many subsidiaries will have to die. Either way promises rewards as well as adjustments. "This is the age when employees can start working for themselves," says Nippon Steel's Otsuka. "If I were younger, I could have done that." In time, many managers of the generation behind Otsuka's may get their anxiety and take his advice to break free.

By Emily Thornton in Tokyo



Losing Weight

COMPANY/INDUSTRY	THE DOWNSIZE
SUMITOMO Trading	Cutting its top subsidiaries from 300 to 150
MITSUBISHI ELECTRIC Machinery	Reducing domestic units from 180 to 140
DAIEI Retailing	Dropped 13 of 132 subsidiaries and affiliates; more cuts may follow
TOYO TIRE & RUBBER Tiremaker	Trimming workforce by 1,500 at parent and affiliates

DATA: COMPANY REPORTS

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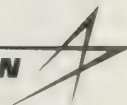
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ED BY PAUL MAGNUSSON

ASIA IS WHISPERING: 'YANKEE COME BACK'

The bellicose rumblings from Beijing are giving Asian governments a bad case of the jitters. China refuses to dial back on the warlike rhetoric targeting Taiwan, and has edged closer in recent weeks to asserting its independence. Beijing's argument with Manila over some potentially valuable real estate in the South China Sea has a nasty twist. And a bold assertion by the Chinese that they have the neutron bomb is reminding its neighbors how lethal an arms race could be.

Asian governments want an insurance policy—and are looking to Washington to get it. That's an interesting

Some regional leaders who once welcomed U.S. meddling are suddenly turning away for a spot under America's protective umbrella. That could mean an increase in the U.S. military's already considerable influence in the region. But Washington has to tread carefully: It has to help its friends without arousing the ire of an already irritated China. The Philippines offer a perfect example of the "Yankee Come Back" syndrome. China kicked the U.S. out of its two military bases in 1991. But since then the Chinese have intensified their

stake in the Spratly Islands, which may be sitting on huge natural gas deposits—and which Manila claims.

Now the Filipinos want the Americans to come visit—officially. On July 22 the USS Blue Ridge, flagship of the U.S. Seventh Fleet, sailed into Manila harbor greeted by red, white, and blue balloons and the Philippines Navy band. The ship arrived three days after a Philippines patrol boat collided with a Chinese fishing boat in disputed waters, provoking a wave of outrage from Beijing. But Philippines President Fidel Ramos sees China as the bully. He wants the U.S. to show that small countries aren't "helpless in the face of expansionist designs."



OFF KOREA: Is gunboat diplomacy back?

The visit of the Blue Ridge also fortuitously gave the U.S. a chance to show force just as the latest Taiwan crisis heated up. Officially, the U.S. has frowned on President Lee Teng-hui's separatist pronouncements. But the presence of a U.S. flagship not far from the Taiwan Strait is a none-too-subtle reminder of America's high level of interest in the region. Mindful of this, China has signalled its willingness to negotiate over the Spratlys.

The China question is not the only one nagging Asian leaders. Japan now fears North Korean missiles, so it's cooperating with the U.S. on research for a missile defense system.

Singapore worries about a spread of anti-ethnic Chinese violence from Malaysia and Indonesia: Its government is upgrading port facilities to handle the biggest U.S. aircraft carriers.

LOCAL COP. Local politics in Asia still have an anti-American tinge, so the region's leaders cannot reconstruct the kind of U.S. presence that characterized the cold war. For example, a proposed landing strip in Okinawa has run into local opposition. But though Asians may not want a police station next door, they still want cops on the beat. "What [Asians]

want is a constant flow of U.S. Navy traffic through the region," says a senior State Dept. official. That also works for the U.S. Navy, which needs flexibility. "The era of bases is over," says the Seventh Fleet commander, Vice-Admiral Walter F. Doran. "That's not necessarily a bad thing."

Building up the U.S. military profile will still be tricky. If the U.S. and Japan cooperate on missile defense, for example, China will feel compelled to bolster its missile arsenal. There's no easy solution. But in these times, many Asian governments will be glad to see those U.S. flattops steaming into port.

By Stan Crock in Washington and Michael Shari in Singapore, with bureau reports

GLOBAL WRAPUP

MAKING VENEZUELA

Venezuelan President Hugo Chavez is determined to make good on his oft-repeated threat to dissolve Congress and the Supreme Court. On July 25 his leading Patriotic Pole alliance candidates captured 94% of the 128 seats in the Constitutional Assembly, which is slated to rewrite the constitution over the next six months. Congress responded by promptly going on recess—a protest against Chavez' plan to shut Congress down on his own. Chavez is now expected

to ask the Constitutional Assembly to eliminate the offices of the National Electoral Council, the comptroller general, and the prosecutor general. All three opposed Chavez, who staged an unsuccessful military coup in 1992, then was elected president in 1998.

Opponents fear that Chavez will orchestrate a dictatorship disguised as democracy. Chavez says he needs a new constitution to bring social justice to the impoverished country. He insists that the government institutions are invalid because they are corrupt.

An overhaul of the nation's charter could set the stage for a showdown with the Supreme Court, which has already ruled that the assembly is not empowered to make drastic changes. But with his popularity rating at nearly 80%, Chavez should get his way. He is already addressing the masses from the presidential palace balcony with his wife—reminiscent of Argentina's Perons. Yet the euphoria may be short-lived. Despite rising oil prices, which account for 70% of export revenues, the economy is expected to keep contracting.

JUST WILD ABOUT HARRY POTTER

The hot children's book series gets an offbeat rollout

Forget Teletubbies. Britain's biggest children's export of the decade may turn out to be Harry Potter, 11-year-old wizard and hero of a series of novels that are attracting legions of pint-sized fans. For the magically challenged, Harry is an ordinary boy—save for the lightning-bolt scar on his forehead—with extraordinary powers. “The [books] are exactly like real life except they have magic,” gushes 10-year-old Amalia Beckner of Austin, Tex., who read the first title, *Harry Potter and the Sorcerer's Stone*, in a day.

She has lots of company. The first two titles in the planned series of seven have been published in 25 languages in 130 countries and have sold more than 5 million copies worldwide since Harry's 1997 debut. In the U.S., kids have snapped up more than 1.7 million copies since the series hit last fall. Advance orders for the newest installment, *Harry Potter and the Prisoner of Azkaban*, which won't be in U.S. stores until September, have reached 920,000, though impatient Potterphiles are ordering it from Britain via Amazon.com. The series' popularity has landed author J.K. Rowling a slew of awards and a six-figure movie deal with Warner Bros. Inc.

RECORD PRICE. But that cultlike following leaves Warner, which controls most of the merchandising rights, and U.S. publisher Scholastic Inc. with an enviable marketing problem: how to turn the current surge of grassroots popularity into sustainable, long-term sales. A week after the first Harry Potter book was released, children's publishing powerhouse Scholastic snapped up the U.S. rights for \$105,000—the largest sum ever paid to a first-time children's author. “It had all the qualities of classics such as J.R.R. Tolkien's trilogy and C.S. Lewis' *Chronicles of Narnia*,” says Arthur A. Levine, an editorial director

at Scholastic who acquired the books. Exploiting that potential without ruining the Harry Potter mystique, however, will take some wizardry on the part of Harry's brand handlers.

Not that Scholastic hasn't fielded megahits before. It owns R.L. Stine's giant Goosebumps franchise. But many in the industry say the formulaic Goosebumps series and the carefully crafted Harry Potter books could not be more different. Levine agrees. Comparing Goosebumps with Harry Potter, he says, is like comparing Danielle Steele with Toni Morrison: “Both are huge sellers, but they need to be approached differently.”

Scholastic and Warner are determined to treat Harry Potter as an enduring classic—something that was

paramount to Rowling as she and agent, Christopher Little, shopped rights. While the Goosebumps showed up on everything from boxes to snack-food bags, both publisher and movie studio say that the marketing this time around will be restrained. “We are very conscious

quality with Harry Potter,” says Lori di Bonaventura, president of worldwide theatrical production at Warner Bros.

For its Scholastic release, the books first in hardcover and high-quality paper and original illustrations will follow. Despite an \$18 price tag, the books are flying

KEEPING THE MAGIC: Harry Potter marketers are treating the series like a classic

the shelves. To build interest, Scholastic seeded a word-of-mouth campaign months before the first book was released, circulating early copies to influential critics, librarians, children's librarians, children's “our own universal big mouths,” says marketing manager Jennifer Pasanen.

So what about Harry Potter toys and shirts? Don't look anything until Warner

releases the live-action film, scheduled for 2001. No licenses will be granted until there's a finished script, but says a number of major corporations are sniffing around, including Disney Corp., which may pursue a video game. Other likely items include Harry Potter magic wands and gear for Harry Potter favorite sport, quidditch, a sort of airborne soccer for wizards.

Whatever makes it off the drawing board will have to be developed with care. “No one wants to see the book cheapened,” says Little. That means Scholastic and Warner will have to jure some magic of their own to sales up without turning Harry into a toad.

By Kerry Capell in London,
Larry Light in New York
and Ann Therese Palmer in Chicago

Harry Potter and His Global Craze

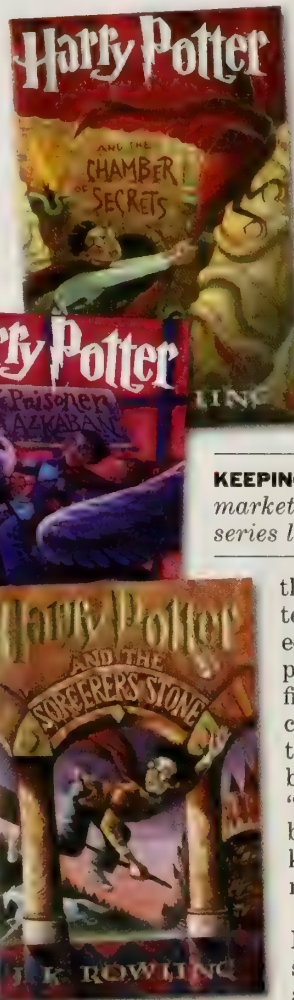
WHO HARRY IS An 11-year-old wizard who can cast spells and is the hero of a hot new series of kids' books by British author J.K. Rowling.

NUMBER OF TITLES Seven planned. Three out in Britain, two in the U.S.

NUMBER OF BOOKS IN PRINT 3 million in U.S. and Britain; more than 5 million globally.

WHERE YOU'LL FIND HIM In bookstores in 130 countries and a movie from Warner Brothers due in 2001.

WHERE YOU WON'T SEE HIM Cartoons, fast-food restaurants, or any other place that could cheapen his image.



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His remarkable
journey to become
Maytag's CEO

The Saga of LLOYD WARD

BY DAVID LEONHARDT

The journey began on a narrow country road in southern Michigan. There, in a 20-foot-by-20-foot house with no running water, lived the Ward family: mother, father, three sons, and two daughters. In the rare moments during the 1950s and 1960s that Rubert Ward wasn't working—at his day job as postman, his night job as movie house janitor, or his Sunday job as Baptist preacher—he liked to gather his boys and talk about "Ward & Sons." It was the imaginary auto-repair shop that he dreamed about one day running with them.

In reality, he had no training as a mechanic, but he had made himself an expert by checking out manuals from the library, in the same way he later figured out how to remedy the house's sagging roof and install plumbing. "He would take on things he had no clue about, and he would get a book, and he would learn," says the middle Ward child, Lloyd.

Rubert Ward never got to start Ward & Sons. He died of a heart attack in 1967, at 47. But from his tiny house, with its tight quarters and big dreams, would emerge one of the most driven men in America today: a star college basketball player who studied to become an engineer, an engineer who transformed himself into an inspirational speaker and one of the country's most re-

STRICT DISCIPLINE Ward, a karate devotee, decided at the start of his career that he wanted someday to be CEO of a major company

Cover Story

spected marketers, and a marketer who next month will become only the second African American ever to lead a large U.S. company.

He is Lloyd David Ward, a singular study in ambition, smarts, and resilience. When he assumes the top job at Maytag Corp. on Aug. 12, Ward, 50, will have made a longer journey than any other executive in Corporate America. Some chieftains, such as Lee A. Iacocca, have escaped poverty to find their way to the corner office. A few African American executives, such as American Express Co. CEO-in-waiting Kenneth Chenault, have over-

Cover Story

come the racism that still plagues the workplace. The country's first black CEO of a major corporation, Fannie Mae's Franklin D. Raines, is one of them, but his impressive rise from poverty in Seattle to head of the government-sponsored company has taken place more in the political arena of Washington, D.C. than in the corporate world.

No one, in fact, has defeated the pincer of poverty and prejudice as Lloyd Ward has. And he has done it at some of the world's best-known companies, from Procter & Gamble to Ford to PepsiCo. Working with Maytag CEO Leonard A. Hadley, Ward over the last three years has reinvented the staid appliance company, helping to triple its stock price.

A master motivator who listens as well as he speaks, Ward has convinced Maytag veterans that change was both necessary and possible. Colleagues laud his ability to challenge people's beliefs without criticizing them personally, to seize on nuggets of common ground, and then to exploit them. "He is a good thinker," says PepsiCo Inc. CEO Roger A. Enrico, "but he is an exceptional leader."

His energy, however, is also the cause of one of Ward's few weaknesses as a manager: impatience. It led to his rash decision to quit P&G in the 1970s when he did not get a transfer he wanted. And it has at times created friction between him and Hadley.

SINCERE. Ward's engaging ways seem always on display. He greets people with a firm handshake, pulling himself closer to them, putting a palm on the back of their elbow, and quickly asking questions about their own life, even when he has never before met them. "Were you born here?" "What's your husband's name?" "How long have you worked here?"

At a recent tour of a Sears, Roebuck & Co. store in Des Moines,

for example, Ward met a longtime salesman who had persuaded a woman to buy Maytag's top-of-the-line Neptune washer sight unseen over the phone. Ward bounded up him with a grin: "I'm Lloyd Ward with Maytag." "I know who you are," the salesman said. "I read about you in the newspaper." Ward's attention-deflecting response was quick: "You're the one whose picture should be in the paper if I sold a Neptune over the phone!"

Ward was being sincere. In an industry that has long suffered from pricing pressure, he found a way to get consumers to pay a hefty premium for big-sticker consumer appliances such as the popular Neptune washer, introduced in 1997. The results are plain to see: Sales of the feature-laden, water-saving Neptunes have exploded, helping Maytag forge a crucial agreement with Sears in 1997 and boost Maytag's market share in major appliances from 15% to 19% since 1996, according to trade magazine *Appliance Manufacturer*. Throw in a hot-selling redesigned refrigerator and Maytag's ever-popular Hoover vacuum cleaners, and it all adds up to a company on a roll.

In 1998, Maytag earned \$522 million from operations on \$4.1 billion in sales—a near doubling of profits on a 37% rise in sales

just three years. For 1999, Nicholas P. Heymann at Prudential Securities Inc. estimates that earnings from operations will jump an additional 19%, to \$620 million, on sales of \$4.5 billion.

Amid the good news, however,

Ward faces big challenges. He is inheriting a lean company whose profits have been driven by a supercharged economy that sooner or later will cool. Meanwhile, Maytag's worldwide presence, a recent plus for the company, may come back to haunt Ward as market conditions strengthen abroad. "There are assumptions built into the stock price that are going to be tough to achieve," says John Wineland, senior vice president at Waddell & Reed Financial Inc., Overland Park (Kan.), investment company that just sold its Maytag stake.

But Corporate America's newest star is hardly stranger to challenges. "My whole life I've been faced with 'No,'" he says. Indeed, his success against all odds demonstrates to what extent bigotry continues to be a part of the American experience. Every step of the way, from a college roommate who wanted nothing to do with Ward to a residen-



NOT SO LONELY ANYMORE
The Maytag repairman with CEO Ward

LLOYD DAVID WARD

BORN 1949, Detroit, Mich.

EDUCATION BS in engineering, Michigan State; MA, 1984, Xavier.

FAMILY Married since 1970. Wife, Lita, 50, met Ward in college. Two grown sons, both consultants at Arthur Andersen: Lance II, 27, a Harvard graduate in Dallas; Lance, 24, a Stanford grad in San Francisco.

WHERE HE GREW UP A three-bedroom, 20-ft.-by-20-ft. house with no running water.



THE FAMILY HOME IN ROMULUS, MICH., HAD THREE CLOSET-SIZE ROOMS—FOR SEVEN PEOPLE

1998 SALARY
\$979,000

PRIZED OFFICE MEMORANDUMS Photos of himself with Colin Powell and Ronald Reagan.

EXTRACURRICULAR A leader of a Des Moines initiative to boost high school graduation rates and entrepreneurialism among African Americans.



WARD (RIGHT) AT 4, WITH HIS TWO OLDER BROTHERS AND A BABY SISTER

FIRST JOB During high school, construction work in Michigan. On long morning commutes, Ward played chess with a co-worker.

ROLE MODELS Parents Rubert, a carpenter, preacher, and janitor, and Sadie passed on to Ward their love of books and education.

ATHLETIC CAREER Won a basketball scholarship to college. Was team captain but had team's worst shooting record.

BUSINESS CAREER Procter & Gamble, 1970-77 and '78-'88; Ford Motor, '77-'78; PepsiCo, '88-'96; Maytag, '96-present. Becomes CEO on Aug. 12.

MAYTAG STOCK HOLDINGS More than 100,000 shares, at a current value of \$7 million. More than 400,000 stock options.

PASSIONS Karate, golf, basketball with his sons. Tennis and Friday night movies with Lita.

FAVORITE BOOKS Nonfiction works, especially business books. Bookshelf includes Al Dunlap's *Mean Business*. Says Ward: "You can learn from people even when they're wrong."

SURPRISE 50TH BIRTHDAY PRESENT A red Dodge Viper from Lita.

WARD'S MOTTO "Play above the rim. Put points on the board."

ON LIVING IN IOWA "Iowans have great values, [but] we go to New York to see a show."



AT MICHIGAN STATE, WHERE HE ESCHEWED GUT COURSES

Ward's hometown who told Ward his "kind" wasn't wanted because he has encountered indignities and obstacles that every African American knows and few whites can fathom.

"THE ANT." Ward is quick to credit those who have guided his career. There were the older black mentors, including the African American engineers who preceded him at Procter & Gamble Co. and Dr. Price M. Cobbs, the well-known psychologist and workplace consultant who counseled him to contain his anger. Most important, there was the woman who taught him to give speeches and carry himself with poise: Lita, his college friend and wife of 30 years. He says he feels like the ant in the fable who turns to an elephant after the two have crossed a bridge and says: "We really shook that bridge!" Ward, laughing at his own story: "I'm the ant that kept going with elephants."

Ward has often been the elephant, too. While working in Iowa, he persuaded Frito-Lay, a PepsiCo unit, to adopt a local high school. Ward then led a group of employees tutoring the students, brought in local pro athletes to

American high school students. "Just because you can't see how to get someplace doesn't mean you don't set the goal," he says.

It would have been difficult for anyone to see his way to the corner office from the street where Ward grew up. It was in Romulus, Mich., then a rural town about 20 miles west of Detroit and now the site of the sprawling Detroit Metro Airport. His neighborhood was little more than a stretch of gravel, pockmarked by tiny square houses. The Wards and their five children squeezed their lives into three small rooms. The three boys lived in one, with a bunk bed that nearly scraped the

give them pep talks—and even rewarded students who passed a test with a trip to an amusement park in a corporate jet. Now he's playing a major role in an ambitious initiative to reach a 100% graduation rate for Des Moines-area African

"It's hard to imagine, but when I think back, it was a wonderful childhood because we were so close"

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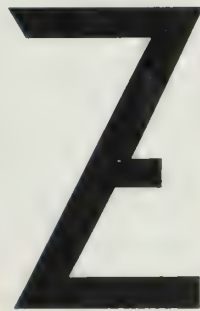
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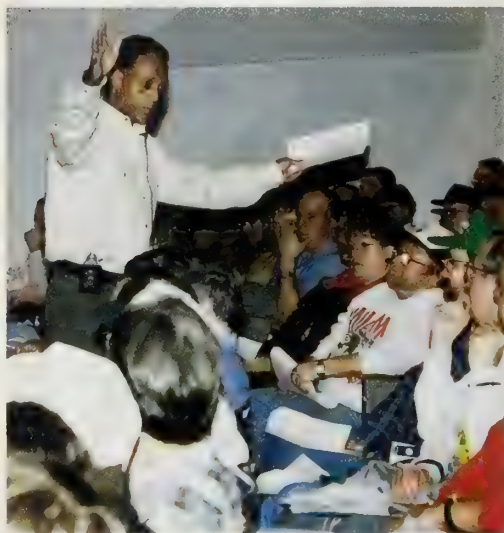
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Ward: Keeping the end in view

"Just because you can't see how to get someplace doesn't mean you don't set the goal"



▲ **SCHOOL SPIRIT** In Dallas, Ward got Frito-Lay to adopt a struggling high school

◀ **EMPLOYEE MEETING** "He is a good thinker, but he is an exceptional leader," says PepsiCo CEO Roger Enrico

dren's world beyond Romulus. To this Lloyd credits his parents for his love of learning. "His parents didn't have the opportunity to go to school," recalls Ward's best friend and teammate from college, Jordan, "but you just knew talking to them that they were very intelligent." The child would read such books as *The Adventures of Tom Sawyer*, and their mother, Sadie, would quiz them on the story. "We made our entertainment," Lloyd says.

ceiling. The girls slept in another, and the parents bedded down on a fold-out couch in a living room full of secondhand furniture covered with dropcloths.

Despite the hardships, the Ward household was a happy place. "It's hard to imagine," Lloyd says now, "but when I think back, it was a wonderful childhood because we were so close." Rubert Jr., the eldest child, was the one Lloyd wanted to be like, the one who pushed him constantly. Delbert, next in line, was the brother Lloyd wanted to be with, the one who was his friend. The sisters, Cheryle and Vivian, meanwhile, idolized Lloyd. He played the big brother, fending off boys who bothered them, and they in turn always seemed to have a glass of

lemonade or a home-baked cookie at the ready. "People think it's good to be a CEO,"

Cover Story

he laughs. "I say: 'You don't understand. Growing up, I knew what it was like to be a king.'"

The family's weekly rhythm revolved around the father's grueling schedule. From Monday to Friday, Rubert drove into Detroit on his motorcycle and delivered mail for the U.S. Postal Service. On most nights, he then went to Engleman's Theater in Detroit, where he swept the floors. Lloyd remembers tagging along with his dad to the movie house. While his father cleaned up, Lloyd watched films like the Western *The Magnificent Seven*. On Sundays, Rubert would load the family into the car and travel back to Detroit to preach at the Christ Temple of Science Church. He was an intensely hard worker who was almost impossible to rattle. "Lloyd reminds me so much of our father," says Delbert Ward, an electrical technician who lives in Michigan with his family. Lloyd's other siblings have similar stories: successful careers, marriages, and children.

It was reading books that really opened up the Ward chil-

Finishing high school in 1969, Ward won a college basketball scholarship to Michigan State University. Ward knew how to use it: He wanted to become a doctor. Before his studies could begin, however, he had some hurdles to climb. When he arrived at college, his white Southern roommate insisted that Ward touch his bed or anything of his in the bathroom. It was a little embarrassing, but he rallied quickly. Ward got to talking to his roommate Jordan, who happened to have an empty bed in the room. Ward moved in, and their first night as roommates, the two stayed up almost until dawn, talking of the racism Ward had experienced and of the anti-Semitism Jordan had encountered when he played away games during high school.

ODD COUPLE. They soon became fast friends, making quite a duo: the 5 ft. 10 in. black kid and the 5 ft. 7 in. Jewish kid. They were the only two on the team under 6 ft. who could dunk the ball. They would stay up late playing basketball with a basketball hanger as rim before Jordan drifted off to sleep and Ward would read the books. To this day, Ward and Jordan—the corporate executive in Iowa and the high school fitness teacher in Florida—remain close, as different, and as similar, as ever.

Other barriers awaited him at Michigan State as well. When the basketball team's academic adviser saw Ward taking courses in organic chemistry and calculus, the adviser told him to switch to easier classes such as health and "introductory basketball." Jordan remembers a coach telling Ward: "I'm paying you to be a basketball player." Ward balked. So the adviser called the registrar's office and switched his class for himself. But Ward walked over to the office and challenged them right back.

Good grades and a strong record on the court proved the coaches wrong, and they eventually left him alone. "I came into Michigan State with the focus not only of playing basketball but of getting a superior education," says

At the start of the '70s, Ward encountered the patronizing attitudes of P&G's early efforts to recruit minorities

Maytag's Hot New Appliances

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customers never
knew they needed



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\$1,400 gets you
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as part of a
standard range

Binge, another
player. "He was
probably the only
guy on the team
like that."

It was a tumult-
time for Ward, with huge highs and lows.
adies veered from medicine to engineering
e got into a car accident and discovered he
t stand the sight of blood. Although hard-
adical, Ward joined in many of the era's civil rights
strations. And at end of his freshman year, his father
uddenly. It left his mother a widow at 43, with few job
and two teenage daughters to bring up. After working as
or, she eventually went back to school to get both bach-
und master's degrees in social work. Few memories light
eyes today like retelling that story.

NUMING JOCK. One story that does is how, in Ward's
more year, he met and ardently pursued an English ma-
m Detroit named Lita. When he called to ask her out on
Lita would always say she had other plans. He kept call-
loyd," she finally told him, "I would like to go out with
it you have to call me two or three weeks in advance. I
a lot of dates."

Afterward, at a Michigan State basketball game, Lita's

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NEPTUNE FOR LAUNDRY DAY

The washer
is expensive
but uses less
water than
a standard
machine

MAYTAG DISHWASHER

New units
are quieter,
and some
can even
sanitize
kids' toys



date that evening pointed to a guard
warming up and said he heard that player
had been asking her out, too. "What?" Lita re-
members asking. She knew about the 5 ft. 10
in. guard who could dunk, but she had no idea
his name was Lloyd Ward. So she put her
glasses on. "And it's Lloyd, cute legs and every-
thing," she says now. Until that moment, Lita
had not realized Lloyd was a team member.

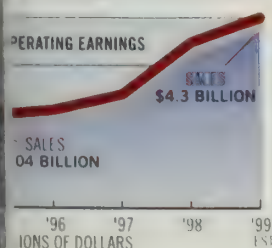
"Jocks usually want you to know [first thing]. I thought: 'You're
a diamond in the rough, and I could polish you up.'"

It was the start of a partnership that has played a bigger
role than anything else in Ward's career. Lita is the gregarious
one who taught Lloyd how to connect with people. She often
edits his speeches. In his eyes, she's still the literary college girl
dishing out verbal gems to the tongue-tied engineering student.
Thanks to Lita's coaching, Lloyd works a room while giving a
speech, peppering the audience with impromptu questions.
Says Lloyd: "How many times do you listen to an executive
and think, 'What are they saying?' or 'I'm bored?'"

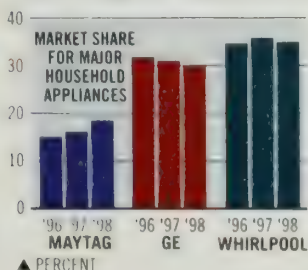
From Michigan State, it was straight to P&G, where Ward
confronted an old problem in a new guise. Instead of overt
racism, Ward this time encountered the patronizing attitudes of
P&G's efforts to hire minorities in those days, say people who

Ward's Touch Helps Maytag Clean Up

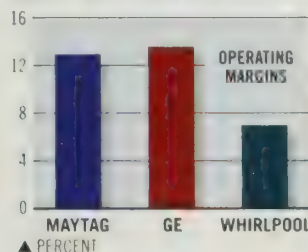
STRONG PROFITS...



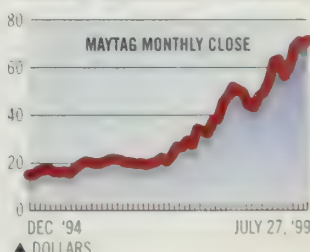
...POPULAR PRODUCTS...



...AND BUOYANT MARGINS...



...HAVE SHARES SOARING



DATA FROM COMPTON NATIONAL MARKETS. APRIL 1999. MAYTAG STOCK PRICE IS IN DOLLARS.

were at the company at the time. Despite his B average in engineering and his having been the captain of a Big Ten basketball team, P&G was willing to hire him and a handful of other blacks only for its "qualifiable" program, an early version of affirmative action. "They brought us in under the stigma of being 'qualifiable,'" Ward says. "The idea was that there weren't qualified African Americans."

Ward nonetheless holds no grudge against P&G. In fact, he now praises the company as an early supporter of diversity. "If it were not for the so-called affirmative action of the '60s and '70s," he says, "people like me may not have ever gotten the opportunity to provide the leadership that we have now been able to give."

SOUTHERN HOSTILITY. Ward made the most of his opportunity, moving up the ranks of the engineering department. His first triumph came in 1972, during a yearlong assignment overseeing the building of a paper plant in Albany, Ga., a city that had been famous for its racism ever since Martin Luther King Jr. was arrested there for demonstrating against segregation in the early 1960s. Now, Ward faced hostility of his own: White workers refused to do any new task until Ward personally walked onto the production floor, rolled up his sleeves, and showed them what he wanted. Focusing on every aspect of the new plant, which churned out Charmin toilet paper and other products, Ward won many of them over and built the plant under budget.

Back at headquarters, Ward let people know he wanted much more than an engineering career. Floyd Dickens Jr., one of Ward's early supervisors, remembers a meeting in the '70s. Ward was wearing his usual gray suit, white shirt, and red tie. Dickens asked Ward about his goals, and Ward didn't mince words: By the age of 45, he wanted to be chief executive of a major U.S. corporation.

It was an astonishingly bold ambition. When Ward came to P&G in 1970, he was one of just eight African American engineers in a department of around 1,200. In large companies, a black CEO seemed as likely as a

black President of the U.S. But that wasn't all. Dickens knew that engineers stood no chance of reaching the top of P&G. That was reserved for marketers and product developers, who knew how to bring money to the bottom line. "You're in the wrong organization if you want that," he told Ward.

So Ward pushed for a transfer that never came. Frustrated, he left P&G to take a job with Ford Motor Co. in 1977 and took his family back to Detroit. The move was a disaster. Ward became lost and struggled inside the massive auto company. A year later, he jumped at the chance to get back to P&G. All he wanted, he said, was, someday, an opportunity to transfer out of engineering.

He got it—and made the most of it. Over the next decade,



"There are many who are systematically excluded. [But] the oppressed have to overcome the prejudices of society. Knock on the door, pull on the handle, and, if you have to, dismantle the hinge"

LLOYD WARD

CEO-to-be, Maytag

Ward skipped from one field to the next, often stepping down from the corporate hierarchy in order to earn his spurs. In 1978, for instance, he remade P&G's 100-year-old Ivorydale soap, which had been expanded in a hazardous fashion over the years. Working with the unionized workforce, Ward redesigned the soap from top to bottom. "Lloyd is a high-energy, very focused, competitive individual," says E. Pepper, chairman of P&G. Ward's former boss. By 1983, he had made the move to general management, heading up the dishwashing unit.

But Ward was tiring of the P&G bureaucracy. In 1983, he was off again, this time for a corporate opposite: the road-ready culture of Pepsi Inc., where Ward thrived. As head of Frito-Lay's western and central divisions, Ward led a charge against archrival Anheuser-Busch Cos.' Eagle Snacks. At the time, Eagle was trying to speed the launch of a new corn-chip brand by offering a free bag of potato chips with every purchase. Ward heard about the strategy and upped the ante. With a "persize" bag of Frito-Lay chips, the company threw in a bag of Doritos, a far more popular and established product than Eagle's entry. Unable to sell its brand, Eagle soon pulled back, and later Anheuser-Busch got out of the snack business altogether. "It was a major

theory, and it was a lot of fun," says Ward.

PEP TALKS. Pepsi was also the place where Ward began to polish his leadership skills. He was constantly out in the field trying to rev up the troops, even showing up at the loading docks to give an informal pep talk to workers. Through it all, Ward's go-for-the-throat competitiveness and his motivational tactics helped increase his division's overall market share in the region from 50% to 56%. "Pepsi in that division had decided that you couldn't grow market share because it was already so high," says Steven S. Rummel, chairman of Frito-Lay. "Lloyd didn't accept that and went on a personal crusade."

Winning at business was hardly his only crusade. When at Pepsi, Ward got deeply involved in the Dallas community. His push to get more high school kids into college. Employed became mentors to students. They dropped in at school work and on weekends to help with homework. Ward tutored kids in his office and brought members of the Dallas Mavericks basketball team to the school to give them a lift. And he whisked kids who passed a state test to a Six Flags amusement park on the Frito-Lay corporate jet. By 1996, 61% of the students passed the state's math test, up from 32% in 1994. "To dream," Ward would tell them. "Learn to love adversity. Form—good intentions are not enough." To this day, Ward urges self-reliance. "There are many who are systematically

Cover Story



-pluribus
e plu-ri-bus u/num [Latin]

unum

out of many, one.

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cluded. [But] the oppressed have to overcome the prejudices of society," Ward says. "Knock on the door, pull on the handle, and, if you have to, dismantle the hinge."

Meanwhile, Ward was intent on advancing his own career. So when a small Chicago search firm came calling in 1995, with an opportunity to interview for a job that could lead to the CEO's office, Ward convinced

Cover Story

Lita it was a good idea—even though it was in Newton, Iowa, 40 miles from Des Moines and a world away from big-city life in Dallas. It was a huge leap of faith: Ward was willing to leave a hot career at marketing heavyweight Pepsi to head the appliance division of a sleepy company personified by the hang-dog look of the Maytag repairman in TV ads. But the fast-track shot at the CEO's job made it worthwhile for Ward.

It was also a big risk for Maytag leaders, who typically promoted carefully groomed insiders. CEO Hadley, for example, has been at the company for 40 years. This time, however, he instructed the board that his successor should be an outsider. The company needed "an extroverted marketing man," he says. "Brand management is very delicate. It's one of the things I drooled over when I had only seen [Ward's] résumé."

LOCAL OUTRAGE. When Ward got the job, Lita, fearful that there would be no place for an African American to shop in Iowa, went out and bought a year's worth of pantyhose. But as strange as it was for the Wards to remake their lives in the Corn Belt, their arrival was equally momentous for Newton, population 15,000. After the Wards' encounter with the local who said their "kind" was not welcome, the story made its way around town, and general outrage ensued. The mayor wrote an apology on the front page of the paper, and the folks who hang out at the Midtown Cafe on the town square worried that it would cause Ward to move Maytag's headquarters elsewhere one day. Says Ward: "People don't understand that for an African American male, it was pretty mild."

Indeed, Ward has endured much worse. Back at Romulus High School, Lloyd, captain of the football team, was not allowed to crown the homecoming queen because she was white. Once, at a gala black-tie dinner in Dallas where Lloyd and Lita were the only black guests, Lloyd was returning to his seat after making a phone call when a man at the next table stopped him and asked him for a cup of coffee. "I don't do coffee. I do

potato chips and Doritos, but not coffee," joked Ward, the Frito-Lay executive, trying to make light of an awkward moment. The man turned back to his tablemates and said, with a straight face: "You see, you can't get good help these days."

This is just the sort of incident that has made Lloyd and Lita adamant about giving their two boys, Lloyd II and Lance, 24, an unvarnished sense of their heritage. Sons grew up in affluent surroundings far removed from their father's Romulus boyhood. Lloyd II went on to graduate from Harvard University, and Lance from Stanford. Both are now well-paid consultants at Arthur Andersen. "We have shared with them our life story," Lloyd says. "They've lived both through their eyes and our eyes."

In Newton, though, Ward's focus is all on the present.

Hadley dumped unprofitable units and revamped products, Ward set about revigorating the company's unsophisticated marketing culture. He sped up the pace of product introductions: Maytag will launch new products this year from only a few in the '90s. He lured more than a dozen executives, mostly from Pepsi and P&G, to Newton. He developed a consumer-research method sending observers into people's houses to watch them cook and clean, rather than simply asking them to fill out surveys. One result: a new \$400 washer to help Maytag compete for the lower end of the business it had long shunned. "We have been able to almost reinvent Maytag," says Mike London, a senior vice president at Best Buy, a major client.

Take the now textbook case of pricing Maytag's new Neptune washer. The initial plan was to price the water-saving machine around \$800, a good

above any rival product. Ward figured Neptune should be priced even higher—at an unthinkable \$1,000. By marketing the machines as environmentally friendly and gentle on clothes, Ward and his team reasoned people would

NIFTY AT 50 Wife Lita gave Ward a Dodge Viper to mark his birthday

willing to pay even more. "Lloyd brought a boldness that I did not have," says William Beer, now head of Maytag's appliance business, who participated in the meetings.

Ward, for instance, supplied a drought-afflicted Kalamazoo town of 200 people with free Neptunes and watched newspapers run front-page stories on how much water it saved. He ordered up a carlike gilded hood ornament for the front of the dishwasher. And to cap it off, he introduced the washer at



"Dare to dream. Learn to love adversity," Ward told kids he tutored. "Perform—good intentions are not enough"



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coln Center in New York, with four of television's most famous moms, including those from *The Brady Bunch* and *Leave It To Beaver*. "This is not something that a company in Newton, Iowa, would have been likely to think of before," says Maytag board member Wayland R. Hicks.

ROUGH SPOTS. The Neptune set the industry on its ear. It showed investors and rivals that consumers could be per-

suaded to buy a new appliance even when their old one was not broken and that price

Cover Story

was not the only reason to choose one brand over another. "It's an incredible story," says Sean D. Katof, an assistant portfolio manager at Invesco Funds Group in Denver, which owns about 1 million Maytag shares. "The appliance industry for years and years has been a very boring industry. Maytag really changed that."

Now, Maytag is on a tear, producing new appliance products and features that consumers never dreamed they needed. There's the \$1,400 Gemini range, which will go on sale in August, with its two ovens. And there's a super fast-cooking oven, due out by yearend, which has been designed to combine the speed of a microwave with the crispness that a regular oven produces.

Maytag's success has inspired rivals to follow in its footsteps. In General Electric Corp.'s effort to snatch up a piece of the high-end market Maytag has targeted, "we have let some share go," says David M. Cote, CEO of GE Appliances. Like GE, market leader Whirlpool is also scrambling to offer hot new

premium products of its own. "You're going to see Whirlpool very much in the direction of Maytag," says Scott Graham, analyst at New York's CIBC World Markets.

Still, Ward's hard-charging ways have led to occasional steps. "There were a few rough spots in front of a department group here and there," Beer says. And while Hadley Ward speak highly of each other, their relationship has been tense at times, say other Maytag executives. Hadley is the elder, bowing out on a high note and reluctant to relinquish control. Ward is the outsider, fond of shaking things up. "His style is very different from mine," says Hadley. "He has meetings I wouldn't hold. He invites more people than I would invite. He says to me: 'You have to go out and sell your program.'" Says Ward: "Succession is hard at this level."

Differences aside, the results have made both men smart. And Maytag's remarkable run has at last paid off for Ward. In May, Maytag's board gathered to announce that Lloyd Ward would become the company's ninth chief executive. Afterward, Lloyd and Lita celebrated at a posh Moines restaurant.

When Lloyd and Lita got home that night, exhausted, they climbed the stairs to their bedroom and collapsed in two folding chairs. Neither said anything. "We just looked at each other," Lloyd says. The silence lasted for more than five minutes. Their journey was complete. They had made it to the top together. Rubert Ward would have been proud. It may not have been "Ward & Sons," but a member of the family finally had his business of his own.

With bureau rep

DON'T MESS WITH THIS MAYTAG REPAIRMAN

It's 6 p.m. on a Wednesday evening, and I'm punching the next chief executive of Maytag Corp. in the stomach as hard as I can. "Huh!" he shouts, exhaling forcefully each time my fist is halted by his abdomen. "Huh!"

Decked out in a white robe and his recently earned black belt, Lloyd D. Ward is giving me my first karate lesson, in the basement of his suburban Des Moines house. The shouts, he explains, allow him to absorb the blows. Without any air in his lungs, he is incapable of having the wind knocked out of him.

"THE COACH." For the next hour, we practice karate moves, pound a plastic dummy with boxing gloves, lift weights, and do push-ups. This is how Ward, captain of Michigan State University's 1970 basketball team, begins six out of every seven days—at 5 a.m. sharp. His fanatical athleticism is a side few of his colleagues see, but it relates very much to his style as an executive.

At the office, he likes to refer to himself as the coach, not the boss. And during our workout in the basement, he is a consummate teacher,



offering me specific advice and encouragement at every turn. "You got it. Cool!" he says, after I finally figure out where to put my left foot to set up for my next move. As we move to other exercises, accompanied by a constant beat of Motown tunes, the exhortations keep on coming. "Outstanding! ... Go! Go, David! ... You're

BLACK BELT

Ward works out at 5 a.m. sharp six days a week

a natural boxer!" Well, hardly, but for the moment, I believe him.

Ward absolutely despises losing to any opponent—real or imagined. A few months back, he was watching a karate show on television, and a 76-year-old master announced he would get down and do 100 push-ups in 60 seconds. "No," Ward said aloud to the TV. "No, you won't." But the man then did, and Ward has been trying to duplicate the feat ever since. With his wife, Lita, counting out loud, he set his personal best right before my eyes: 100 perfectly formed push-ups in 66 seconds.

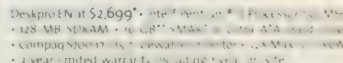
His ferocious competitive streak extends even to squaring off against his own sons. To earn his black belt, Ward had to defeat a series of karate masters. The last one standing between him and his black belt was his son Lloyd II. The younger Ward landed one blow after another, but Lloyd kept at it. "He was the toughest," says Ward. "But I did it." Not bad for a 50-year-old guy who has made his name selling washing machines.

By David Leonhardt
in Clive, Iowa



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DEALMAKING

HOW GE LOCKED UP THAT BOEING ORDER

It took a hefty dowry to marry off its problem child

Late last fall, as frigid winds began blowing outside their headquarters in Evandale, Ohio, the folks behind General Electric Co.'s most powerful aircraft engine were in a bit of a funk. Although the GE90 engine was tailor-built for Boeing Co.'s 777 long-range jet, it continued to be an embarrassing laggard behind the engines of GE's two competitors. Pratt & Whitney was still roaring ahead in sales. Meanwhile, British Airways PLC had just shocked the aviation world by dumping the GE90 in favor of engines from rival Rolls-Royce PLC.

When Boeing began discussing plans for an even longer-range version of the 777 early this year, though, GE Aircraft Engines President W. James McNerney

Jr., saw a chance to redeem the troubled project. Digging deep into GE's ample financial resources and harnessing the personal lobbying skills of his boss, CEO John F. Welch, McNerney and his team made Boeing an irresistible offer of financial support. In addition to pushing the technical merits of their powerful engine, industry executives close to the negotiations say GE agreed to help finance Boeing's development of the 777X—a highly unusual arrangement whose value some pegged at as much as \$500 million.

GE officials, who declined to discuss details of the contract, got their reward on July 7. Boeing agreed to a deal that makes GE the exclusive engine supplier to the largest and most powerful of the

long-range jets, which start flying late 2003. The deal—which GE could be worth up to \$15 billion in sales—marked the first time that aircraft manufacturer had agreed to a permanent engine monopoly in the jet market.

In part, the terms of the contract reflect the growing competitiveness of aircraft-engine business. GE saw a chance to vault ahead in one of the segments where it has been weak. "The GE90 was really built with this long-range application in mind," McNerney says. But it also signals GE's willingness to slash today's profit margins in order to lock up decades of lucrative service and spare-parts business. The move is also risky for Boeing, which must now price the new 777X plane low enough to make it worthwhile for airlines to give up the flexibility of choosing between engines by GE, Pratt & Whitney, and Rolls. Says Chris Partridge, an analyst at Deutsche Bank: "You can lose one or two or three key customers, if they walk away, it will really hurt Boeing's boat."

COSTLY ENGINE. The deal bails out a problem child for GE. Boeing began developing the 777 10 years ago as a twin-engine jet to fly transoceanic routes where demand might not warrant the costs of a four-engine 747. Pratt



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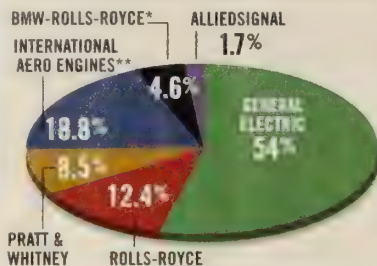
Rolls chose to modify existing engines to power the new plane. GE, however, sank more than \$2 billion into developing a giant new engine. But many airlines made it clear that they didn't think they needed the GE90's power advantage—or its extra weight. Moreover, problems with development and testing caused high-profile delays in Federal Aviation Administration certification.

By April, 1999, 3½ years after British Airways flew the first GE90s, orders for the engine still trailed the models Rolls and Pratt offered for the 777. That had to bruise some egos in a company that won more than half of all '98 engine orders. "The GE90 was one of the few areas where Jack [Welch] has not been particularly successful," says one rival exec.

WINNER TAKE ALL. GE got its second chance with Boeing's decision to launch an extended version of the 777. After re-vamping its design to fly up to 10,100 miles nonstop—1,200 more than any cur-

GE DOMINATES ENGINE SALES GLOBALLY...

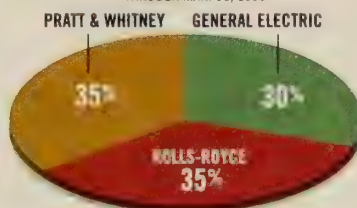
1998 COMMERCIAL JET ENGINE MARKET SHARE



DATA: GE AIRCRAFT ENGINES *BMW-ROLLS JOINT VENTURE **PRATT-ROLLS JOINT VENTURE

...BUT WANTS A LARGER PIECE OF BOEING'S BIG JET

BOEING 777 ENGINE SHARE THROUGH MAR. 31, 1999



DATA: BOEING CO.

rent 777 model—Boeing projected orders for 500 of the aircraft over 20 years. And the 777X would need a more powerful engine. "With these thrust requirements, we would need significant changes in the [777] engine or a new engine altogether," said John P. Roundhill, vice-president for product strategy and development at the Boeing Commercial Airplane Group.

It quickly grew apparent that the terms of the deal would be different as well. Both GE and Pratt insisted they would have to invest \$500 million in modifications to meet the specs. To justify those costs, each insisted on a winner-

take-all contract. "I would not be on a plane to hang that engine on after it's built," complains Robert F. L. Pratt's executive president for engine programs. Only Rolls offered to split the business. Roundhill says the deal became clear early that only one company would get this contract.

As weeks of negotiations wound down, McNamara and his small team

continued to press the merits of their engine, arguing that it was more powerful, fuel efficient, and quieter than the others. Each player predictably sliced prices. GE proved to have deeper pockets, with profit margins of almost 18% a year, compared with 13% for Pratt and 8% for Rolls. GE also had the high-profile support of Welch, who took a strong interest in the talks. Insiders say he helped close the deal.

Boeing said it kept its customers informed on the bidding and doesn't anticipate defections. Still, officials at U



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SAMANTHA ELLIOTT, CATASTROPHE TEAM & KEVIN YATES, AGE

...s, British Airways, and other big
aren't happy with the 777X engine
only. They say they'll wait to see
on the 777X. "Boeing's going to
do some fast negotiating to get
to buy that airplane," says Robert
er, executive vice-president of op-
s at American Airlines, a big 777
er. GE's ferocious negotiations can
eat up the engine wars. Rivals are
to sell engines at cost, or lower, be-
they can make it up later on service
are parts, which can command prof-
its of 20% and 50%, respectively.
"One is looking to future business,"
eter Barnes-Wallis, a spokesman
is in London.

At this deal, though, it remains to be
GE can keep its spoils. If enough
jump to Airbus Industrie's new
nge aircraft, the four-engine A340-
6, initially powered by Rolls, Boeing
be forced to rethink the monopoly.
Airbus is clearly prepared to ex-
ny misgivings. "We have never
exclusive deals," sniffs an Airbus
in Toulouse, France. As GE has al-
shown, in the brutally competitive
e business, nothing is set in stone.
*Diane Brady in Greenwich, Conn.,
ureau reports*

THE MAN WHO WOULD BE WELCH

In the race to succeed John F. Welch at the helm of General Electric Co., every win counts. The deal to place the GE90 engine into Boeing's 777X aircraft is just the latest reason why W. James McNerney Jr., 49, is among a half-dozen leading candidates.

The aircraft division has soared during McNerney's two-year stint as CEO and president and has been one of GE's top performers in profitability. Last year, operating profits at GE Aircraft Engines rose 30%, to \$1.8 billion, while overall revenues jumped by 32%, to \$10.3 billion. But even before that, McNerney had delivered strong results as the head of units ranging from GE Lighting and Information Services to Asian operations. On the downside, some wonder if he has benefited from being in the right place at the right time, such as Asia during its boom.

Even McNerney's latest coup may

not be enough to unseat the candidate many observers see as the favorite. Jeffrey R. Immelt, 42, who heads up GE Medical Systems, is an outgoing leader who has chalked up terrific results during tough times for his industry. He scored a key victory on July 19 with a \$1.5 billion contract to sell diagnostic imaging equipment and services to Columbia/HCA Healthcare Group.

If McNerney is passed over, at least he should have little trouble recovering. His name came up in several top CEO searches recently, including those at Compaq Computer Corp. and Electronic Data Systems Corp. When you're a hot exec, the consolation prize is never too shabby.

By Diane Brady



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017 Special Notices

~ Words of Thanks ~

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INVESTIGATIONS

A STREET SCANDAL THAT MAY NOT DIE

What did the NYSE know about illegal trading?

In recent days, word has emerged from the New York Stock Exchange about plans for a possible initial public offering of stock. There are plenty of obstacles to an IPO, but one seems to have been surmounted: The NYSE's floor broker trading scandal is at an end. Ten floor brokers—part of the army of people who execute large trades on the NYSE floor—were accused of abusing their positions by carrying out trades for their own profit. Nine of the 10, all trading at an obscure brokerage called Oakford Corp., have pleaded guilty. And on June 29, the NYSE emerged mostly unscathed from a Securities & Exchange Commission enforcement action. The NYSE pledged to beef up its oversight of floor brokers—which, the SEC maintained, has been woefully deficient for years.

But in fact, reverberations from the floor-trading scandal may not be over for the nation's most prestigious stock exchange. In announcing the NYSE settlement, the SEC disclosed that federal prosecutors have "probable cause" to believe that 64 floor brokers illegally traded for their own profit in recent years. The U.S. Attorney's office in Manhattan is continuing its probe into trading-floor chicanery. And prosecutors have received explosive allegations from a central figure in the scandal: Oakford President William S. Killeen.

FULLY AWARE. Killeen, who pleaded guilty to two felony charges, has made grave allegations against major Wall Street firms and personalities—including NYSE Chairman Richard A. Grasso, who Killeen insists was aware of improper trading by floor brokers. He also maintains that floor brokers for Goldman, Sachs & Co. and other firms engaged in improper trading and that the largest specialist firm on the NYSE, the white-shoe brokerage Spear, Leeds & Kellogg, was fully aware of Oakford's illegal use of floor brokers to trade stocks. That is denied by Spear.

Killeen disclosed these allegations in hours of recent conversations with former American Stock Exchange trader-turned-whistle-blower Edward Manfredonia. Manfredonia, who has alleged that Amex traders have engaged in extensive misconduct (BW—Apr. 26), was introduced to Killeen by a friend of Killeen's. Manfredonia says he released tapes of the talks to BUSINESS WEEK because he believes Killeen was unfairly singled out. Beyond confirming portions of his conversations with Manfredonia used in preparation of this article, Killeen declined to be interviewed, citing his upcoming sentencing.

To be sure, Killeen's allegations are, to a large extent, self-serving. Moreover, they apparently were part of an unsuccessful effort to obtain lenient treatment from prosecutors. On May 20, Killeen pleaded guilty to one count of income-tax evasion and one count of securities fraud, and he will be sentenced on Sept. 21. Killeen has maintained that in his meetings with the U.S. Attorney's office in Manhattan before the plea, prosecutors rebuffed his efforts to provide information. "They only want to hear [about] Oakford. They don't want to hear [about] other firms," Killeen bitterly told Manfredonia.

Oakford, Killeen maintains, was alone in profiting from trading by brokers, which the government says violates the securities laws. That, indeed, is repeated by Killeen throughout his conversations with Manfredonia. He noted that he "did business" with 150 floor brokers over a six-year period and asserted that "there are 60 different firms, broker-dealers as my own, that do this kind of business day in and day out with the floor brokers on the floor."

According to the February, 1999 indictment and subsequent SEC charges, Killeen oversaw a scheme in which independent floor brokers engaged in short-term trading on the NYSE, splitting the profits from the trades with Oakford. Floor brokers execute trade usually large, institutional orders through the various specialist booths on the



“Anybody that tells you know

change floor. (Specialists are broker-firms that buy and sell particular securities and are required to maintain an order book in those shares.) Traditionally, floor brokers get a small commission on each trade, even as little as \$2—hence their nickname “two-dollar brokers.”

Federal securities laws and NYSE

or brokers from trading for their personal profit. That is because floor traders get information on buy and sell orders and other information on the flow of orders. This is not publicly available and would give them an unfair advantage over investors.

Defense lawyers in the Oakford case have argued that personal trading by floor brokers has been such an accepted practice in recent years that the defendants did not have criminal intent and thus did not commit a crime. And they asserted that arrangements in which floor brokers share in the profits of trades without necessarily having their names on the accounts, had been sanctioned for many years by the exchange, and were explicitly banned only last October. There is no dispute, however, that it has always been illegal for floor brokers to initiate trades for their own accounts. NYSE officials declined comment on the allegations regarding widespread im-

proper trading—250, vs. the 64 suspected by the government—have been involved in illegal trading and that Oakford's trading practices were common knowledge. "There's nobody that didn't know," he told Manfredonia. "And anybody that tells you they didn't know is a liar."

"LUDICROUS." Killeen says he has provided prosecutors with the names of more than 100 floor brokers who have traded illegally, for their own profit. The U.S. Attorney's office declined comment, while an NYSE spokesman describes Killeen's assertion that 250 brokers traded illegally as "ludicrous."

Still, Killeen's contentions regarding the breadth of the scandal dovetail with the public record and flesh out defense assertions that the practices alleged by the government are widespread at the NYSE. In its settlement with the NYSE, the SEC found that from 1993 to 1998 "groups of independent floor brokers" engaged in illegal trading schemes, and

defense lawyer Victor J. Rocco noted that an NYSE survey in 1993 found that 230 floor brokers and 10 of the 40 specialist units "engaged in intraday trading in over 200 stocks" for personal profit. This, he asserted, supported the defense's view that improper trading was widespread. However, some of the intraday trading cited in the survey—aimed at capturing bid-ask spreads—was legal for brokers at the time. NYSE officials would not release the survey.

Some of Killeen's most serious allegations concern the firm that cleared trades for Oakford from 1992 to 1998—Spear Leeds. He says Spear Leeds was intimately involved in the operations of Oakford. His firm, he notes, had a "joint back office" arrangement with Spear that gave Spear a particularly intimate role in the oversight of Oakford. Joint back offices or "JBos" are an arrangement that's becoming more commonplace on Wall Street, in which large



... know is a liar." — WILLIAM KILLEEN, President of Oakford

eties, saying doing so would conflict with their SEC settlement.

In his wide-ranging conversations with Manfredonia, which took place during the week of July 19, Killeen explained considerably on these assertions. He says that as many as half the floor brokers on the exchange

the NYSE "failed to take appropriate action" to root out such activity.

Defense lawyers for the 10 accused floor brokers—nine of whom pleaded guilty—cited even higher numbers than the 64 noted in the consent decree. In a letter to Judge Jed S. Rakoff on April 30, on behalf of all the defendants, de-

clearing firms become partners with small day-trading firms, allowing smaller firms to obtain far greater leverage than they could on their own. But the trade-off for this leverage is oversight—because the larger firms can take on, if they choose, substantial credit risk.

Killeen says that Spear lent his firm



KILLEEN (LEFT): *Pleaded guilty to two felonies*

up to \$30 million a day and that Oakford was thus a large and valued customer. Carl H. Hewitt, Spear's general counsel, says he is not aware of the volume of business Oakford conducted.

Killeen repeatedly insisted, in conversations with Manfredonia, that Spear became intimately acquainted with its JBO partner Oakford—including its use of floor brokers to trade for their own profit. To say otherwise, Killeen asserts, is "ridiculous." He has maintained that "every trader that came on my desk, they [Spear Leeds] approved," and that a Spear managing director named Randy W. Frankel personally approved the often-sizable checks issued to floor brokers as their piece of the profits, as much as \$100,000 at a time. Frankel was on sabbatical from Spear Leeds and unavailable for comment.

FREQUENT VISITS. Killeen maintained that Spear Leeds "knew who was trading for us, how much they were trading, what stocks they were trading, when they were paid, [and] how much they were paid." Among the Spear officials who were aware of floor brokers trading for Oakford, he maintains, were four of the nine members of the firm's executive committee—Harvey Silverman, Gary Goldring, Robert Luckow, and Frankel. Killeen says that Silverman frequently visited Oakford offices and twice offered to make Oakford a unit of Spear Leeds. Silverman and Goldring did not return phone calls, and Luckow was out of the office and unavailable for comment. But Hewitt says he "spoke to everyone in-

involved and can confirm to you that the allegations are untrue."

By Killeen's account, his relationship with Grasso was also close. He maintains that he has told prosecutors that Grasso and he were friends, and that the Big Board chairman was familiar with his method of doing business and aware of trading by Oakford's floor brokers—who constituted the majority of Oakford's traders. He observed to Manfredonia that he and Grasso had breakfast meetings "seven or eight" times, including a January, 1997, meeting with Grasso, which he says was attended by Edward J. Mueger, one of the 10 floor brokers indicted with Killeen, who is described by Killeen as an old friend of Grasso. An NYSE spokesman says that while Grasso has met Killeen, he was never told by Killeen about trading by floor brokers. Mueger, whose Long Island phone is disconnected, could not be reached for comment. An NYSE spokesman declined to comment on Grasso's relationship with Mueger.

Defense lawyers in the Oakford case had argued that the NYSE sanctioned the conduct of their clients. Indeed, New York lawyer Dominic F. Amorosa,

says Grasso denies knowing of "violative or illegal activity" among floor brokers.

Killeen maintains that many brokerages profit from trading by floor brokers on their payrolls. "If [floor brokers] see something good on the floor, they just go over to tell the desk 'clock a buy' [or] 'clock a sell' whatever they're going to do, and execute the trade." According to Killeen, Goldman floor brokers have a separate segregated trading account, "and get their bonus based on their account."

Killeen says he saw a Goldman floor broker initiating a trade for the firm in 1997, during one of his frequent visits to the floor. "He [the Goldman floor broker] did it while we were together on the floor, right in front of me."

The stock involved in the trading was, says, was Dayton Hudson Corp. "I just saw the stock was getting very volatile and he says: 'The stock's going to break here. It's going to go up.' I says: 'I'm going to buy some for my account.'" A Goldman spokesperson released a statement saying: "We have not been contacted by any regulatory authority regarding these allegations and are unaware of any such activity."

An official of the U.S. Attorney's office in Manhattan declined comment on any of Killeen's assertions, citing an ongoing investigation under way. But whatever information Killeen may or may not have tried to provide the feds, it is not the current federal probe may be included in scope. An NYSE spokesman says the exchange itself, "to the best of our knowledge," is not under investigation.

FLAT DENIAL A spokesman for the New York Stock Exchange says Chairman Richard Grasso denies that he knew of any "violative or illegal activity" among floor brokers

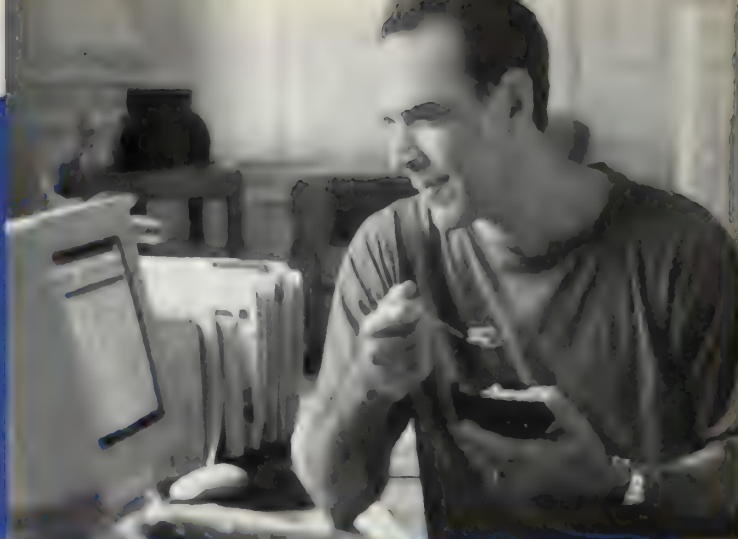
who won dismissal of charges against floor broker John R. D'Alessio, supports Killeen's assertions about Grasso. While saying that he doesn't know of the meetings referred to by Killeen, he asserts that "Grasso and the people at the New York Stock Exchange were aware of what these guys were doing." Amorosa describes as an "interesting issue" whether "that puts Grasso in the middle of criminal conduct." An NYSE spokesman says Grasso cannot comment on Amorosa's comments because D'Alessio remains an NYSE member, albeit suspended, and thus "is subject to the regulatory jurisdiction of the NYSE." He

Likewise, Hewitt, Spear's general counsel, says he is not aware of any probe directed at Spear stemming from the floor-trading scandal at the NYSE.

The 39-year-old Killeen is, of course, hardly a choirboy himself. Prosecutors maintained that he rode herd over a scheme to flagrantly violate the laws of the floor of the nation's leading stock market. But had the NYSE floor already been sullied—by indifferent enforcement of the rules, profiteering floor brokers and firms whose size and clout has discouraged prosecutors? It's a troubling question. And it deserves an answer.

By Gary Weiss in New York

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INSIDE WALL STREET: A REPORT CARD

Featured stocks usually surged at first, but lagged later on

Last year was a nightmare for stock market pros. The indexes were strong, but the gains were concentrated in a narrow band of high-profile megacap stocks like Microsoft, General Electric, and Wal-Mart Stores. That kind of environment was brutal for stockpickers who sought opportunity in what the crowd was overlooking, just the sort of situations reported in BUSINESS WEEK's Inside Wall Street column.

In that light, the results of our analysis of the performance of the 183 stocks featured in the column last year is not

slightly trailed the S&P over six months.

Since Inside Wall Street reports more often on small companies, we also measure performance against the Russell 2000 index, a broad gauge of small caps. Here, the column's returns were better, nosing out the Russell index during the three- and six-month periods, and beating it handily over the shorter periods.

Of course, Inside Wall Street is not a managed portfolio. Written by veteran Wall Street journalist Gene G. Marcial since 1981, the column reports the latest information and market talk—usually not yet widely known—that could affect the fortunes of companies and, of course, the prices of stocks. It's about potential mergers or takeovers; exciting new products, changes in earnings, for better and for worse; and corporate developments such as restructuring, spin-offs and asset sales.

Comparing the Column

Inside Wall Street featured 183 stocks in 49 issues in 1998. For each issue, the returns for the market benchmarks were calculated for each of four time periods. Those returns were averaged over all 49 issues, and the results are below. The average return for the column was figured the same way.

	1 DAY	1 MONTH	3 MONTHS	6 MONTHS
STANDARD & POOR'S 500	0.3%	2.7%	6.3%	11.2%
DOW JONES INDUSTRIALS	0.3	2.1	4.2	8.9
RUSSELL 2000	0.2	0.6	-0.8	-2.9
INSIDE WALL STREET	4.9	3.8	-0.1	-2.2

DATA: BUSINESS WEEK, STANDARD & POOR'S CORP.

surprising. But it is disappointing. The stocks of the companies, on average, swamped the gains in the Standard & Poor's 500-stock index and the Dow Jones Industrial average on the first day the column appeared, usually a Friday (table). One month later, the Inside Wall Street stocks were still way ahead of indexes, up an average of 3.8%. At the three-month mark, the average Inside Wall Street stock was slightly negative and well behind the market—and after six months, the average stock was down 2.2%, vs. the S&P's 11.2% gain. In 1997, the first year for which we undertook this analysis, the column's stocks drubbed the S&P and the Dow overwhelmingly in one-day and one-month periods. The column also topped the S&P and Dow in the three-month period, and beat the Dow and only

The inside line can come from investors, money managers, securities analysts, or company executives.

To measure the column's performance, we use Thursday closing prices. The magazine is available online Tuesday nights and begins to reach subscribers and newsstands on Friday. Thursday close is the base for all measurements. The one-month, three-month, and six-month figures are the stock-price percentage change between the stock's pre-publication and the other dates. When one of the dates falls on a weekend or holiday, we use the previous trading day's closing price. When stocks split, we adjust prices accordingly.

CALCULATIONS. We also adjust prices for takeovers. If a company has been acquired in a stock swap during the measurement period, we calculate the return based on the price of the stock that the shareholder of the stock will now own. So the three-month calculation of Chrysler gains—13.2% and 12.8%, respectively—was based on the 0.6235 shares of Daimler-Benz AG that the U.S. auto maker's shareholders received. For deals, we assume the cash received for the stock's price at the next measurement date.

The biggest impact from a mention in BUSINESS WEEK is on Friday, the opportunity investors have to act on the information. The first-day price reaction is overwhelmingly positive, u-

Inside Wall Street
BY GENE G. MARCIAL

CD WAREHOUSE MAKES MUS

In early October, CD Warehouse (CDW) shares tumbled 25% in a market-wide sell-off. Not a week later, CDW was back at its starting price. The stock's rebound was a result of a combination of factors: a strong earnings report, a new management team, and a new business strategy.

Inside Wall Street
BY GENE G. MARCIAL

THESE STOCKS MAY JUST DEFY

This market is a minefield of opportunity. Here are some of the stocks that may just defy the odds.

Inside Wall Street
BY GENE G. MARCIAL

FINGERHUT GETS A GRIP ON THE NET

Fingerhut (FHT) is getting fresh attention from investors. Some praise the stock as an undervalued Internet play. Others see the stock as a direct-mail market.

Inside Wall Street
BY GENE G. MARCIAL

AT&T COULD BRING NEW ZING TO TCI

It isn't all certain that AT&T's proposed acquisition of Telecommunications International (TCI) will get government approval. Some fear that the merger could hurt competition in the telephone market.

Inside Wall Street
BY GENE G. MARCIAL

STERICYCLE: A CLEAN PLAY

Investors looking for a clean play should consider Stericycle (STC). The company is a leader in the medical waste management industry.

Inside Wall Street
BY GENE G. MARCIAL

A GREAT AIR FOR

Investors looking for a great air play should consider Air Products (APD). The company is a leader in the industrial gases industry.

The Inside Wall Street Scorecard

are the 183 stocks featured in Inside Wall Street during For each stock, we have the last closing price before the n became public, usually a Thursday. Then, using that as a base, we computed one-day, one-month, three- and six-month percentage returns. When any of those

periods ended on a weekend, the prior Friday's closing price was used. All prices have been adjusted for stocks splits. When a company was taken over in a stock swap, we calculated prices based on the new stock. The Thursday close is 11 days before the issue date.

	THURS. CLOSE	1 DAY	PERCENT CHANGE 1 MO.	3 MOS.	6 MOS.	ISSUE DATE
	48 7/8	-0.1	-2.7	6.5	-3.1	1/12/98
VICK	30 7/8	-1.0	-0.6	15.1	-18.1	1/12/98
INSTRUMENTS	45	6.3	21.4	20.3	33.3	1/12/98
ERN PACIFIC FUNDING	13 1/4	-1.9	3.8	18.1	24.8	1/12/98
AR TECHNOLOGIES	28 1/4	-0.2	2.0	-16.3	-48.0	1/12/98
	37 1/8	-3.3	17.8	-2.4	5.4	1/19/98
	13 1/8	6.3	17.5	11.2	20.2	1/19/98
HEALTH SERVICES*	22 1/4	5.1	-1.5	-19.2	-9.6	1/19/98
	16 1/4	3.0	38.1	73.9	25.4	1/19/98
DICAL MANAGEMENT	16 1/8	1.1	29.3	-13.3	-95.2	1/26/98
	75 1/8	1.6	10.3	28.7	53.0	1/26/98
I BANK	29 1/4	2.9	7.3	23.0	24.9	1/26/98
DEVELOPMENT	25 1/4	-5.9	-12.2	28.0	42.8	2/2/98
ONICS	22 1/4	0.3	21.1	-19.9	-16.3	2/2/98
K	17 1/8	7.0	5.9	6.6	0.0	2/2/98
	63 1/4	-0.8	-0.7	17.5	13.6	2/9/98
STONE	18	7.3	38.2	82.3	88.5	2/9/98
T ENTERPRISES	11 1/4	7.5	7.5	4.3	2.2	2/9/98
CHICAGO NBD ¹	76 1/8	-0.1	5.2	19.3	1.5	2/16/98
INK	54 1/8	1.6	1.3	11.3	-8.6	2/16/98
OSTON	47 1/8	1.4	5.0	14.7	-1.5	2/16/98
VOICE SYSTEMS	10	6.3	-8.8	3.8	14.4	2/16/98
O TECHNOLOGY	37 1/8	-0.9	2.7	-15.7	-72.7	2/16/98
INE COMMUNICATIONS	27 1/4	1.7	-2.9	18.5	-26.5	2/16/98
ECTRONICS	23 1/4	2.1	-23.4	-7.2	-30.1	2/16/98
MMUNICATIONS	45 1/4	8.3	25.7	5.4	-8.8	2/23/98
COMMUN. INTL.*	18 1/8	8.0	-7.0	-5.2	-7.3	2/23/98
INDUSTRIES	19 1/4	3.2	3.8	9.2	27.2	2/23/98
	5 1/4	17.4	16.3	8.7	-6.5	2/23/98
ONIC	52 1/4	1.7	4.4	-0.7	12.2	3/2/98
	8 1/4	20.0	-3.1	-22.1	-15.4	3/2/98
MAY GOLF	31	6.0	-4.8	-31.5	-59.7	3/2/98
'S STORES	17 1/4	0.7	26.9	-1.0	0.7	3/9/98
PLUS	14 1/4	-0.8	1.3	-14.3	-32.8	3/9/98
IGENT ELECTRONICS ²	6 1/4	5.4	11.8	19.2	NA	3/9/98
NECT SOLUTIONS ³	17 1/4	2.2	10.8	15.1	NA	3/9/98
N BEER	9 1/4	5.4	21.1	19.0	-23.8	3/16/98
OK ALE BREWERY	7 1/4	0.9	4.4	-11.5	-38.1	3/16/98
S CITY SOUTHERN	37	2.4	23.6	20.9	-14.2	3/16/98
AX	7	1.8	37.5	19.6	40.6	3/16/98
NAL STEEL	16 1/4	-0.4	3.7	-26.9	-59.0	3/23/98

STOCK	THURS. CLOSE	1 DAY	PERCENT CHANGE 1 MO.	3 MOS.	6 MOS.	ISSUE DATE
NETWORK SOLUTIONS	12 1/8	4.9	67.8	55.6	23.9	3/23/98
U.S. SURGICAL ⁴	33 1/4	3.3	-2.8	16.5	20.4	3/23/98
SEAGULL ENERGY ⁵	17 1/4	8.0	7.7	-12.4	-32.1	3/30/98
BOUYGUES OFFSHORE	21 1/4	3.0	-0.9	6.2	-34.3	3/30/98
RESPONSE USA	5 1/4	25.6	12.2	23.2	-9.8	3/30/98
PAYMENTECH	18 1/8	5.6	2.3	9.9	-24.8	4/6/98
RECOTON	25 1/4	4.9	-1.5	39.9	-13.0	4/6/98
COLUMBIA LABORATORIES	13 1/8	4.2	-25.1	-58.1	-70.7	4/6/98
MICROAGE	14 1/4	1.7	10.4	-2.2	-9.6	4/13/98
MONARCH DENTAL	17 1/8	-0.7	-5.0	-12.2	-25.2	4/13/98
COAST DENTAL SERVICES	27 1/4	-0.9	-15.8	-48.2	60.4	4/13/98
NATIONAL INSURANCE GROUP	10 1/4	25.0	24.4	-14.0	-36.6	4/13/98
ALCOA	35 1/2	1.8	7.8	-6.2	11.2	4/20/98
A.T. CROSS	12	0.0	-0.5	-2.1	-49.0	4/20/98
PIONEER HI-BRED INTL.	34	-1.4	17.6	3.3	-23.5	4/20/98
AMERICAN EXPRESS	102 1/2	4.5	1.6	12.6	-13.2	4/27/98
GAYLORD CONTAINER	7 1/4	5.6	15.9	-12.7	-64.3	4/27/98
BAKER HUGHES	40 1/2	4.3	-6.9	-24.8	-46.5	4/27/98
SCHLUMBERGER	78 1/2	-1.2	4.1	-12.5	-33.8	4/27/98
LYCOS*	27 1/4	1.5	4.6	-34.8	-29.3	5/4/98
INFOSEEK*	28 1/8	9.0	-8.6	10.3	-9.7	5/4/98
EXCITE*	30 1/6	-2.7	1.2	-54.5	-10.2	5/4/98
SUNRISE MEDICAL	14 1/4	0.9	10.8	-10.4	-37.7	5/4/98
CRYSTAL SYSTEMS SOLUTIONS	17 1/2	7.1	-15.0	-32.1	-47.1	5/4/98
MAPICS	19 1/4	0.0	-6.2	-3.3	-9.2	5/4/98
MHV COMMUNICATIONS	27 1/4	2.5	-12.2	-17.9	-69.7	5/4/98
GLOBAL MARINE	23 1/4	5.6	-4.8	-38.5	-47.1	5/11/98
IGEN INTERNATIONAL	36 1/4	3.4	-11.5	8.6	-17.9	5/11/98
COVENTRY INDUSTRIES	48	5.2	-2.1	-47.9	-84.9	5/11/98
FITSTON BRINKS GROUP	39 1/8	2.7	2.5	-7.6	-24.8	5/18/98
HSL COMMUNICATIONS	29 1/4	-0.9	-13.7	29.4	-23.6	5/18/98
COMPX INTERNATIONAL	24 1/4	0.0	-7.6	-14.2	-16.8	5/18/98
KRAUSE'S FURNITURE	3 1/4	5.0	-20.0	-60.0	-60.0	5/18/98
BANKAMERICA ⁶	83 1/4	-0.6	2.5	-5.0	-20.9	5/25/98
NATIONSBANK ⁷	75 1/4	-0.7	2.1	-7.4	-22.7	5/25/98
SYNOPSIS	43 1/4	3.3	-0.4	-16.4	9.3	5/25/98
AMGEN	30 1/4	6.1	-0.4	8.5	25.0	6/1/98
HIRSCH INTERNATIONAL	10 1/4	1.8	-26.0	-68.0	-60.9	6/1/98
USA DETERGENTS	12 1/4	9.1	39.4	-8.1	-19.2	6/1/98
ICUS	16 1/4	29.6	16.5	3.8	38.5	6/8/98
NATIONAL RECORD MART	10 1/4	9.7	-9.7	-50.9	55.4	6/8/98

red by BancOne Corp. for 162 shares, Oct. 2, 1998.
red by Xerox Corp. for \$7.60 a share, May 21, 1998.
red by Xerox Corp. for \$20 a share, May 21, 1998.

4. Acquired by Tyco International for 0.7606 shares, Oct. 2, 1998.
5. Renamed Ocean Energy, Inc.
6. Acquired by NationsBank for 1.13 shares, Oct. 1, 1998.

7. Renamed BankAmerica Corp.
*Short sale

continued on next page

average 4.9% from the Thursday close. Indeed, of the 183 stocks reported on, 135 were up on Friday. That's the "announcement effect" of the column, which often happens in other situations such as a piece of significant news from a company or a strong recommendation from a well-followed analyst.

Depending on the company and the story behind it, the stock can really jump that first day. Look at Biomira, a biotechnology company in Edmonton, Alberta, which trades in the U.S. on the over-the-counter market. The stock, mentioned in the Dec. 7 column, had closed at \$2 (U.S.) per share on Nov. 25 (a Wednesday, since because of Thanksgiving the magazine went to press a day early.) The company, the column reported, was developing a vaccine to battle breast cancer, and had a

The Best Performers...

FOR ONE DAY		FOR ONE MONTH	
BIOMIRA	140.6%	NETWORK EVENT THEATER	77.4%
EARTHLINK NETWORK	37.2	NETWORK SOLUTIONS	67.8
WAVEPHONE *	35.4	SECURITY DYNAMICS TECH.	55.0
FOR THREE MONTHS		FOR SIX MONTHS	
FINGERHUT	92.1%	IMCLONE SYSTEMS	164.1%
BIOMIRA	90.6	EAGLE HARDWARE & GARDEN	103.7
MONEY STORE	82.3	FINGERHUT	96.1

* Renamed Wavo Corp.

marketing pact with Chiron Corp., a larger biotech company, to produce and market the vaccine. The news was electric: On the Friday after Thanksgiving, a day with a short trading session and low volume, nearly 5.5 million shares of the stock traded, more than 10 times the company's average, and the stock jumped to 4 1/2%, up 140.6% for the day. In mid-May, the stock traded as high as 5 1/2, but was at 3 1/2 on May 25, six

months after publication.

Biomira's enormous gain was atypical. The next-best day performances came from EarthLink Network Inc. at 37.2%, and WavePhone at 35.4%. Analyst Joel H. Kerner of First Albany Corp. forecast that WavePhone's developer of high-speed Internet services for distributing programming to TVs and computers would go to 20 from 11 within a year. Instead, the stock

headed south. After six months, the company, since renamed Wavo Corp., was selling at 8 1/2.

Inside Wall Street had better luck with other Net plays such as Network Event Theater, Network Solutions, and Security Dynamics Technologies. Three were big winners in the three-month time period. The column also reported on Net stars Lycos, InfoSeek, and Excite back in April, 1998, but

The Inside Wall Street Scorecard

STOCK	THURS. CLOSE	1 DAY	PERCENT CHANGE 1 MO.	3 MOS.	6 MOS.	ISSUE DATE
BOLDER TECHNOLOGIES	10 1/2	11.9	19.0	-4.8	-13.1	6/8/98
REEBOK INTERNATIONAL	28 1/2	7.4	-0.9	-43.5	-47.7	6/15/98
GENERAL MILLS	69 1/2	1.7	-2.5	-6.5	11.7	6/15/98
ADVANCED HEALTH ⁸	13 1/2	-6.7	-71.3	-86.1	-88.3	6/15/98
SANGSAT MEDICAL	30	2.3	4.6	-36.7	-30.0	6/22/98
VIATEL	11 1/2	3.2	38.3	-6.4	61.2	6/22/98
TELESPECTRUM WORLDWIDE	8 1/2	1.5	-1.8	-31.6	8.8	6/22/98
CRW FINANCIAL	5	12.5	15.0	-27.5	27.5	6/22/98
CIRCUS CIRCUS ENTERPRISES ⁹	16 1/2	10.0	-3.1	-38.5	-31.9	6/29/98
PROJECT SOFTWARE & DEV.	21	9.5	7.1	-35.1	43.2	6/29/98
TERA COMPUTER	10 1/2	13.1	-4.0	-37.7	-28.0	6/29/98
ELECTRO SCIENTIFIC INDS.	31 1/2	-1.8	-23.6	-48.6	33.9	7/13/98
EXCEL TECHNOLOGY	8 1/2	6.1	-3.8	-14.5	25.2	7/13/98
VETERINARY CTRS. OF AMER.	19 1/2	5.1	-3.8	-16.6	-2.9	7/13/98
WIZTEC SOLUTIONS	11	11.4	11.4	-18.2	22.2	7/13/98
KELLSTROM INDUSTRIES	29 1/2	6.7	1.5	-52.3	-8.8	7/13/98
GILLETTE	59 1/2	4.9	-15.0	-35.1	-23.1	7/20/98
TYCO INTERNATIONAL	64 1/2	0.3	-4.7	-24.7	18.7	7/20/98
WAVEPHONE ¹⁰	10 1/2	35.4	-10.3	-67.4	-22.9	7/20/98
CHINA TELECOM	33 1/2	0.2	-20.6	4.4	12.2	7/27/98
NIPPON T&T	43 1/2	2.7	-16.8	-9.7	-13.4	7/27/98
PHILIPPINE LONG DIST. TEL.	24 1/2	-5.2	-25.4	-13.0	6.0	7/27/98
SK TELECOM	7 1/2	4.4	-7.6	15.6	56.4	7/27/98
HOUSTON INDUSTRIES ¹¹	29 1/2	0.4	-4.4	7.8	5.3	7/27/98
NETOPIA	8 1/2	18.2	-2.9	-51.8	10.2	7/27/98

8. Renamed AHT Corp.

9. Renamed Mandalay Resort Group

10. Renamed Wavo Corp.

11. Renamed Reliant Energy, Inc.

12. Renamed BancWest Corp.

13. Acquired by Daimler-Benz AG for 0.6235 shares, Nov. 9, 1998.

14. Acquired by Lowe's Co. for 0.64 shares, April 2, 1999.

STOCK	THURS. CLOSE	1 DAY	PERCENT CHANGE 1 MO.	3 MOS.	6 MOS.	ISSUE DATE
SOTHEBY'S HOLDINGS	23 1/2	-2.6	-11.8	-18.9	62.5	8/3/98
NATIONAL PRESTO INDUSTRIES	39 1/2	-1.9	-0.5	-1.1	2.7	8/3/98
VALLEY NATIONAL BANCORP	29 1/2	6.5	-2.0	-12.0	-12.0	8/3/98
QWEST COMMUN. INTL.	20	0.9	-25.5	-2.2	49.8	8/1/98
KRUGER	47 1/2	-0.7	4.1	16.5	33.3	8/1/98
BURLINGTON COAT FACTORY	24 1/2	0.8	-9.0	-38.3	-41.1	8/1/98
CBS	31 1/2	0.4	-18.4	-6.5	13.1	8/1/98
CHARMING SHOPPES	4 1/2	1.4	-5.6	-12.5	-18.1	8/1/98
GLENAYRE TECHNOLOGIES	7 1/2	5.7	-13.8	-17.9	-45.5	8/1/98
INTEGRATED DEVICE TECH.	6	12.5	-17.7	22.9	22.9	8/1/98
SONIC FOUNDRY	8 1/2	10.0	-20.0	-9.2	9.2	8/1/98
J.P. MORGAN	117 1/2	8.2	-19.5	-13.1	-7.6	8/3/98
MICROAGE	14 1/2	5.2	-15.1	-3.4	-10.3	8/3/98
ENZO BIOCHEM	11 1/2	6.7	-33.7	2.2	-5.6	8/3/98
INHALE THERAPEUTIC SYST.	24 1/2	-6.9	6.4	32.6	12.0	9/7/98
LONGS DRUG STORES	35 1/2	1.1	16.9	-0.4	3.2	9/7/98
FIRST HAWAIIAN ¹²	28	7.1	22.3	55.1	40.0	9/7/98
AMR	50 1/2	-0.4	7.0	39.4	15.7	9/1/98
COMSAT	27 1/2	5.8	25.8	29.4	5.8	9/1/98
GANNETT	58 1/2	-1.1	-8.7	8.5	7.5	9/1/98
MERCURY GENERAL	39	-0.6	-8.2	8.3	-15.1	9/1/98
MERRILL LYNCH	63 1/2	-3.4	-28.0	14.7	21.6	9/1/98
CHRYSLER ¹³	48 1/2	0.0	-11.1	13.2	12.8	9/1/98
LENHAR	18 1/2	3.0	3.0	25.5	21.8	9/1/98
EAGLE HARDWARE & GARDEN ¹⁴	20 1/2	13.1	-8.1	45.2	103.7	9/30/98

ale recommendations like Murphy, editor of *Unpriced Stock Service*. Fundamental advice may be sound, but the timing is off. An Infoseek short position produced a 10.6% gain in three months, but six months after the first mention, the stocks were higher. It could have produced loss for short-sellers. Long before investors ever got to the Internet, they were talking about takeovers—and Inside Wall Street has always tuned its ears in to that chatter. Some of the deals with the biggest gains were made. Fingerhut Cos., a direct-mail retailer with a growing Internet presence, was bought out for \$25 a share by Federated Department Stores Inc. about six months after it was highlighted in *Magazine* as a Net play, not as a takeover. In the Sept. 21 issue, retailing analyst Alan M. Rifkin of U.S. Bancorp. had already predicted that Lowe's was the nation's No. 2 home-improve-

...And The Worst

FOR ONE DAY		FOR ONE MONTH	
CD WAREHOUSE	-16.9%	ADVANCED HEALTH †	-71.3%
QWEST COMMUN. INTL. *	8.0	CD WAREHOUSE	38.6
INHALE THERAPEUTIC SYS.	6.9	ENZO BIOCHEM	33.7
FOR THREE MONTHS		FOR SIX MONTHS	
ADVANCED HEALTH †	-86.1%	FPA MEDICAL MGMT.	-95.2%
HIRSCH INTERNATIONAL	-68.0	ADVANCED HEALTH †	-88.3
WAVEPHORE **	-67.4	COVENTRY INDUSTRIES	-84.9

* Reported as short sale, issue date Feb. 23, 1998

† Renamed AHT Corp

** Renamed Wavo Corp

DATA: BLOOMBERG FINANCIAL MARKETS

ment chain, would acquire Eagle Hardware & Garden. That very deal was announced on Nov. 22. And a column that closed Feb. 25, 1998, reported takeover whispers about Intelligent Electronics and its 80%-owned subsidiary, XLconnect Solutions. Eight days later, Xerox Corp. agreed to acquire them.

But alas, FPA Medical Management Inc., a would-be takeover featured in the Jan. 26, 1998, issue, never happened. In fact, the company, which managed physician groups, was already ailing, and many

thought it would be resuscitated by a stronger partner. The stock rose 29% after a month, but no acquirer stepped in and the company went into bankruptcy. The stock was down 95.3% six months later.

But the second item in that Inside Wall Street column was a hearty recommendation of pharmaceutical giant Pfizer Inc. by Lew Rabinowitz of R. Lewis Securities. He bet that the

Food & Drug Administration would approve the impotence drug Viagra in the spring, and the stock, at 77, would be above 100 in a year. He was right on the FDA and wrong about the stock, which was over 100 within three months and has split 3-for-1 since.

Preliminary indications for 1999 so far are that the column is beating the averages. We plan to report on this year's performance this time next year.

By Jeffrey M. Laderman, with B. Kite, in New York

	THURS. CLOSE	1 DAY	PERCENT CHANGE 1 MO.	3 MOS.	6 MOS.	ISSUE DATE
DIY	11 1/4	2.8	8.9	16.7	55.6	9/21/98
HERX BIOPHARMA*	18 1/2	6.1	-10.3	-7.9	3.8	9/21/98
GROUP	9 1/2	15.2	20.9	40.5	35.4	9/28/98
ATTUNAL GAMING	15 1/2	4.8	6.3	-7.1	-31.3	9/28/98
	6 1/4	18.7	19.6	10.3	13.1	9/28/98
	30 1/2	5.3	7.8	52.0	-19.7	10/5/98
SURGICAL PRODUCTS	25 3/4	-2.5	6.2	2.4	54.9	10/5/98
CKMATE	4 1/2	1.3	-5.1	11.5	-37.8	10/5/98
ASSOCIATES ¹⁵	34 1/2	-0.9	12.8	9.2	11.7	10/12/98
7 GAMES	11 1/2	5.0	-12.8	-2.8	-22.8	10/12/98
CHNOLOGY GENERAL	6 1/2	14.4	20.6	13.4	-2.1	10/12/98
MORRIS	47 1/2	-0.7	10.7	14.1	-28.3	10/19/98
L-MYERS SQUIBB	46 1/2	3.1	21.9	42.3	39.0	10/19/98
LANTIC	51 1/2	-3.6	7.7	9.7	6.9	10/19/98
IE SYSTEMS	6 1/2	14.6	31.1	53.4	164.1	10/19/98
YCLE	15 1/2	-3.2	27.4	15.7	-31.9	10/19/98
INDUSTRIES	7 1/2	3.3	12.5	14.2	27.5	10/26/98
ON HOLDINGS ¹⁶	15 1/2	-2.0	9.1	20.2	18.2	10/26/98
ARRIS STORES	7 1/2	0.0	30.2	-9.5	-6.3	10/26/98
Y	23 1/2	4.0	14.6	18.8	6.9	11/2/98
S. STEEL GROUP	23 1/2	0.5	6.4	11.4	26.6	11/2/98
CH	20 1/2	7.3	26.1	30.9	-35.2	11/2/98
IRD PACIFIC	9 1/2	6.2	11.6	53.4	61.6	11/9/98
BB	22 1/2	3.6	17.9	14.6	3.0	11/9/98
GROUP	25 1/2	-1.5	6.2	3.5	2.7	11/9/98
ENERAL	16 1/2	4.7	14.4	21.8	-27.2	11/9/98

STOCK	THURS. CLOSE	1 DAY	PERCENT CHANGE 1 MO.	3 MOS.	6 MOS.	ISSUE DATE
ROCK OF AGES	11 1/2	9.2	10.3	8.1	-8.1	11/9/98
AEROQUIP-VICKERS ¹⁷	38 1/2	1.0	-12.8	46.9	52.1	11/16/98
MODINE MANUFACTURING	36 1/2	2.9	-1.5	-18.4	-10.3	11/16/98
RED ROOF INNS	17 1/2	14.7	-9.5	-17.2	-8.4	11/16/98
WILD OATS MARKETS	26 1/2	1.4	9.0	-3.3	6.2	11/16/98
LYNX THERAPEUTICS	9 1/2	12.6	13.2	12.6	8.2	11/23/98
HEALTHSOUTH	11 1/2	2.1	18.3	13.1	19.4	11/23/98
ORGANOGENESIS	14	-2.2	-14.7	4.5	-16.5	11/23/98
HEMISPHERX BIOPHARMA	8 1/2	-6.1	-26.7	-29.0	-6.9	11/23/98
NEWMONT MINING	22 1/2	-1.1	-19.7	-20.3	-11.0	11/30/98
COMMINIS ENGINE	39 1/2	1.9	-13.4	4.3	28.3	11/30/98
MIAMI COMPUTER SUPPLY	20 1/2	22.4	30.7	6.7	-3.1	11/30/98
EARTHLINK NETWORK	52 1/2	37.2	29.0	14.9	-4.5	12/7/98
TEREX	27 1/2	0.4	-5.4	-8.3	14.8	12/7/98
BIOMTRA	2	140.6	54.7	87.5	81.3	12/7/98
FINGERHUT ¹⁸	12 1/2	3.9	21.1	92.2	NA	12/14/98
TELE-COMMUNICATIONS ¹⁹	41 1/2	2.6	33.3	54.2	49.7	12/14/98
AT&T	41 1/2	2.0	21.8	34.1	28.8	12/14/98
INHALE THERAPEUTIC SYST.	32 1/2	1.9	3.8	-20.0	-22.1	12/14/98
CD WAREHOUSE	23 1/2	-16.9	-38.6	-47.1	-67.7	12/21/98
SECURITY DYNAMICS TECH.	17 1/2	4.6	55.0	-4.3	0.4	12/21/98
NETWORK EVENT THEATER	10 1/2	2.4	77.4	50.0	27.4	12/21/98
ST. PAUL BANCORP	22 1/2	5.5	4.9	-6.0	13.2	12/28/98
BROOKSTONE	12 1/2	0.5	11.9	-1.0	16.8	12/28/98
CHS ELECTRONICS	14 1/2	0.0	11.9	-52.1	-73.3	12/28/98

17. Acquired by Eaton Corp. for \$58 a share, Apr. 12, 1999.

18. Acquired by Federated Dept. Stores for \$25 a share, Mar. 19, 1999.

19. Acquired by AT&T for 0.7757 shares, Mar. 10, 1999.

* Short sale

DATA: BLOOMBERG FINANCIAL MARKETS, EN

pany split into three units and stocks, Mar. 24, 1999. Now named Varian Inc.
in Medical Systems, and Varian Semiconductor Equipment Associates Inc.
ired by Markel Corp. for \$19 a share, Feb. 9, 1999

COMMENTARY

By Mike McNamee

FASTER, CHEAPER TRADING— CAN THE REGULATORS KEEP UP?

Don't mention Microsoft Corp. to an official at the New York Stock Exchange. Nothing galls the Big Board more than the steadfast refusal of top technology firms—Microsoft, Intel, Oracle, and a host of others—to bring their stocks to Broad and Wall streets to trade. The chips-and-code crowd has kept its shares, and their huge trading volumes, on the Nasdaq market, an affront that leaves the 207-year-old NYSE fuming.

By this time next year, however, New York may have its revenge. Investors buying MSFT or INTC probably will be able to send orders to an ECN, or electronic broker, operating under the Big Board's name. If two NYSE brokers can match buy and sell orders inside the NYSE computer, the trade will close there—with no revenue for Nasdaq. But don't cry for the junior market: Nasdaq will be pairing up with new ECNs to raid New York's trading floor for high-volume issues such as General Electric, AT&T, and IBM.

Poaching on each other's stocks will be just one outgrowth of the accelerated drive by the NYSE and Nasdaq's parent, the National Association of Securities Dealers Inc., to convert their markets from member-owned clubs to stockholder-owned, profit-driven bourses. That conversion, and the competition it spawns, will benefit investors and brokers alike. Tomorrow's markets will feature faster trades, lower costs, and fewer niches where brokers can exploit customers. Equity investing, the middle-class mania of the '90s, could roll into the 21st century on a tidal wave of falling commissions and rising volume.

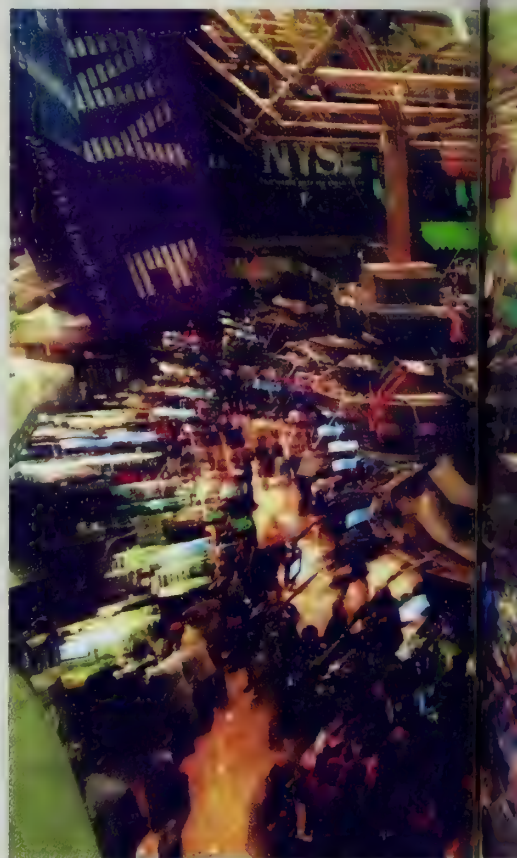
But to ensure that this happens, the Securities & Exchange Commission will have to be very vigilant indeed. For the outlook in the near term is for a fair amount of turmoil. There may be a sharp rise in market fragmentation—a proliferation of trading sites that lowers the odds that every seller of a stock is exposed to

every buyer. While invading each other's trading, markets are maintaining old franchises to protect their members.

The SEC's main job is leveling the playing field. It triggered the NYSE's and Nasdaq's radical reforms with farsighted 1997 rules that unleashed new competitors—nine electronic communications networks, or ECNs—that have taken over 30% of Nasdaq's trading volume by offering faster electronic order-matching. ECNs can even become exchanges in their own right—a route that Archipelago Holdings LLC, the fourth-largest ECN, announced that it would take on July 27. Now, the SEC must make certain that new and old markets still provide investor protections, including links needed to ensure that investors' orders get the broadest possible exposure.

Is the SEC up to the task? Chairman Arthur Levitt Jr. struck the right note on July 26, when he warned Nasdaq and the NYSE that “any proposed structure” must be “consistent with the protection of investors and the maintenance of fair and orderly markets.” But the SEC still must break down Wall Street's cozy clubs, shed its own micromanagement of the exchanges, and streamline regulation.

Nasdaq was the first market to consider public ownership. But NYSE Chairman Richard A. Grasso upstaged the junior market with a bold—and probably overblown—pledge that the Big Board would issue stock to the public before Thanksgiving. Grasso's plan would give each of the exchange's 1,366 members NYSE stock and a perpetual right to trade on the exchange. While wiping out the broker control that's stymied many attempts to streamline the NYSE, the plan could pit traders

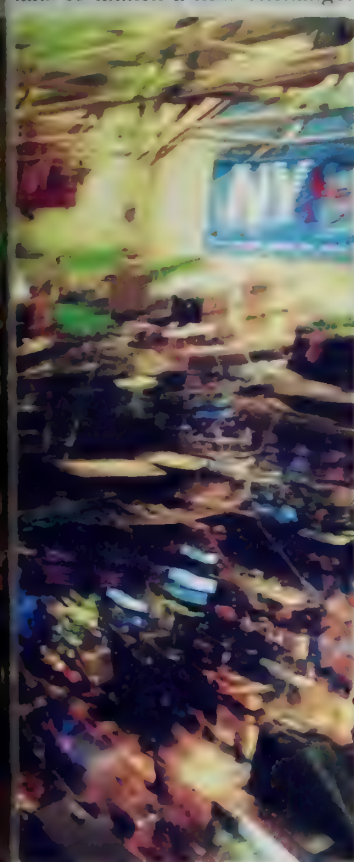


against owners: “What if the shareholders decide the exchange would be more profitable with 5,000 seats?” asks Junius W. Peake, finance professor at the University of Northern Colorado.

REAL RISK. At Nasdaq, Chairman Frank G. Zarb now is moving cautiously. His plan, which NASD's board would be expected to endorse on July 27, would sell a minority stake in Nasdaq to the group's members, listed companies, and technology suppliers. Nasdaq won't consider an initial public offering until next year. Zarb's challenge to convince the small brokers who comprise NASD's 5,530 member firms. The message is blunt: “If we don't do whatever value the members have, Nasdaq will dissipate.”

For Nasdaq, that's a real danger. Its biggest members have invested

in ECNs, betting that electronic trading will dominate the future. On July 21, three big online brokers—Schwab, Fidelity Investments and DLDirect—joined forces with Book, an ECN owned by market-maker Spear, Leeds & Kellogg. On July 27, Instinet Corp., the second oldest ECN, took a 16.4% stake in Archipelago, backing that company's plans to launch a new exchange.



has managed to keep ECNs off the trading floor. But its big players are making electronic competitors: Morgan Stanley & Co. and Goldman, Sachs & Co. are creating a new system called Primex, that could offer a centralized auction for NYSE stocks. To meet these challenges, both Nasdaq and the NYSE need more agility and flexibility. Giving stock to big members would keep trading on the major exchanges. Stock can also serve as currency. "We can use that scrip to acquire joint-venture with other market-ECNs," Grasso explains, "by using the NYSE's brand 'to an unlisted [i.e., Nasdaq] stocks.' It will take more than capital to make the new markets work, where the SEC comes in. The commission's first priority must be to get that the exchanges' regula-

tory role—market surveillance and oversight of members—isn't swept away in the rush to compete. But for-profit markets can't be good regulators: "It will be absolutely clear that these markets compete with the very members that they regulate," says former SEC Commissioner Steven M. H. Wallman.

FAIR SPLIT. Nasdaq recognizes that: It plans to spin off NASD Regulation with an \$800 million endowment. Grasso thinks that NYSE can keep regulation within the for-profit exchange. SEC Chairman Levitt should quickly disavow the NYSE of that notion. Once they're independent, the regulators could be merged or divide up the industry.

Nasdaq market-makers and NYSE

built to route trades between New York and regional exchanges. But the NYSE has been slow to open its doors to competitors, and the system's 25-year-old technology "is like two tin cans and a string," says Archipelago CEO Gerald Putnam. The SEC may have to force markets to cooperate on a new backbone with more equal access.

Equal access, of course, will make it easier for markets to poach on each other. That will create opportunities for new entrants to pile in—for a while. But a shakeout will come swiftly, because trading in a given stock tends to concentrate at the site where sellers can find the most buyers.

Within a few years, proliferating trading sites could boil down to three or four major markets—but they

WHERE STOCK MARKETS ARE HEADED

CAPITALISM, NOT COLLECTIVISM The New York Stock Exchange and the National Association of Securities Dealers plan to convert their markets to for-profit, stockholder-owned companies. Eventually, both are likely to issue shares to the public in IPOs.

MARKETS IN A BOX Two alternative systems—the Island ECN and Archipelago—soon will apply to become exchanges.

CONSOLIDATING THE COPS NASD Regulation and the NYSE are in talks to merge or divide up market supervision.

TURF RAIDS NYSE wants to put its name on systems to trade Nasdaq and foreign stocks. Nasdaq will try to swipe NYSE volume, too. New exchanges will poach on both with cheaper trading.

THE BIG SHAKEOUT In a few years, three or four major markets will emerge. Tighter links between markets will let upstarts constantly challenge the major markets.

DATA: NYSE, NASD, BW

specialists and floor brokers also deserve a hard look. When stock information was tightly held and trading was slow, these players were necessary. But their privileged access to information about a stock's supply and demand gives them such a favored position that the SEC has piled rule upon nitpicking rule to prevent abuses. Often—as in the criminal investigation of floor-broker trading at the NYSE—the rules don't work. Electronic markets won't have such special players, counting on the free flow of information to keep stocks moving. The SEC should help clear away those antiquated roles.

The SEC will also have to push traditional markets to share their infrastructure. To become exchanges, Archipelago and the Island ECN must join the Intermarket Trading System,

won't look like today's. The popular blue chips that now cluster at the NYSE might trade more cheaply on a purely electronic exchange, while New York's floor may be the best home for lower-volume, mid-cap stocks. A new auction market could spring up to nurture microcap issues—threatening Nasdaq's traditional position with high-tech issuers.

Who will come out on top? Ultimately, investors and issuers—the providers and users of capital—should benefit from cheaper, quicker, and easier trading. But that outcome is not guaranteed. The SEC forced markets to compete—now it has to follow through to make sure the competition's fair.

McNamee covers finance from Washington.

INTERNET

THIS TOY WAR IS NO GAME

Big retailers are invading eToys' tempting online turf

This year, toy retailers are rolling out the big guns. We're not talking Super Soakers here—those Day-Glo water cannons that kids everywhere consider must-haves for dousing unsuspecting friends and parents. No, we're talking about the ammunition that the country's biggest toy sellers and leading online giants are stockpiling to snare a share of the Internet toy business this Christmas.

There's a single target in their crosshairs: eToys Inc. Last year, rivals took a beating from the Santa Monica (Calif.) upstart, and they don't intend to let it happen again. The company has paved the way for selling toys online and has become the brand to beat. In December, eToys was the fifth-most-visited online shopping destination, according to researcher Media Metrix Inc. In the crucial fourth quarter, which accounts for two-thirds of all toy sales, the company's revenues soared to \$22.9 million, up from \$530,000 a year earlier. While that's barely a ripple in today's \$23 billion U.S. toy market, Forrester Research Inc. estimates online toy sales will hit \$1.5 billion by 2003. That success has prompted the company's \$3.7 billion valuation—even though the shares, which hit 76¢ when first sold to the



Amazon.com and Wal-Mart are gearing up their Web sites to meet the eToy challenge

PERSONALIZED SERVICE WILL KEEP CUSTOMERS LOYAL, SAYS CEO LENK

public in May, have been cut in half along with other Net stocks.

Now, the competition is fighting back. Toys 'R' Us Inc. spun off its Web site as a separate company in April and, in anticipation of the holidays, plans to invest \$80 million in it. In May, Consolidated Stores Corp.'s KB Toys snapped up BrainPlay.com, an Internet specialty toy retailer. And Wal-Mart Stores Inc., the country's largest toy merchant, promises a total overhaul of its Web site in time for Christmas.

The real firepower, though, emerged on July 13. That's when E-commerce giant Amazon.com Inc. charged into the category with a toy section whose page looks as if it were taken directly from eToys' book. A week after launching its toy business, Amazon.com snatched the top spot: "I believe I've already the largest seller of children's products online," said CEO Jeffrey P. Bezos, a claim based on sales of books, videos, and music. Amazon.com quickly came to dominate every market it has entered, using its huge customer base—which now tops 10 million people—to surge into the lead in net music sales in four months and videos, in just 45 days.

NEW MARKETS. While eToys is unable to hold on to its spot as the top toy retailer on the Net in a battle with heavyweights, the company looks capable of remaining a strong player. The company's strategy is to stock the deepest selection anywhere, including 15,000 playthings—not including books—from mass-market hits to specialty products. Toys 'R' Us, meanwhile, carries 10,000 items in each store, while KB has around 10,000 online. At the same time, eToys is branching into other children's categories with the goal of becoming the dominant Net retailer of merchandise for children up to

Cyber Toy Battle

PRODUCT	LAUNCHED ONLINE	PLUS	MINUS
ETOYS	October, 1997	Internet first mover, broad selection of 15,000 playthings	Tiny \$30 million sales for year ended Mar. 31; unknown to mass market
WAL-MART	June, 1996; relaunch later this year	Largest U.S. toy retailer, buying clout, in-store returns	Sparse 200-item selection, limited Web experience
TOYS 'R' US	June, 1998; relaunched April, 1999	Brand name, buying leverage, in-store returns	Fumbled 1998 holiday; Web unit looking for CEO
AMAZON.COM	July, 1999	Stellar Internet brand, 10.7 million customers	Late entry

DATA BUSINESS WEEK

ENERGY

BATTLE OF THE BATTERIES

Whose smaller, cheaper version will land under the hood?

Car batteries have no sex appeal. Dainty lithium batteries in cell phones and notebook computers may keep getting tinier, lighter, and more powerful. But that hefty lead-acid clunker under the hood hasn't evolved radically since the 1940s.

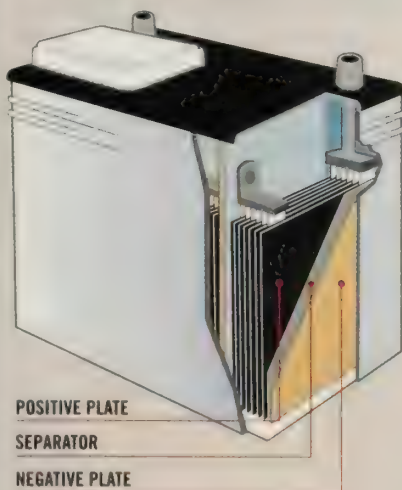
But in coming months, a battery revolution is going to sweep through the transportation sector. Dramatic advances in nickel-zinc batteries could lead to new types of electric bikes and scooters and may eventually change the shape and performance of car batteries. Even before that happens, auto makers are getting a peek at lead-acid car batteries that pack the power of a standard 40-pound box into a product that weighs no more than a laptop.

Although brand-new, these develop-

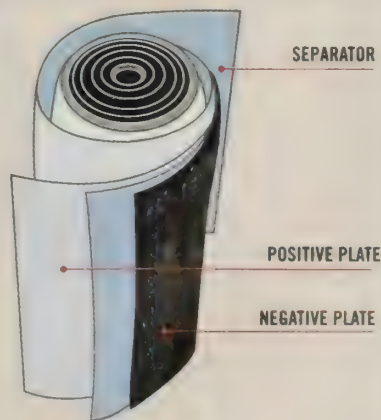
ments are already shaking up the battery establishment. In April, tiny Evercel Inc. in Danbury, Conn., snared Robert L. Kanode as chief executive. Kanode, one of the five original developers of IBM's ThinkPad computers, hopes to take Evercel into the major leagues with a special class of nickel-zinc batteries that can be recharged 500 times. That's five times as often as such batteries today. A few years before Kanode plotted his move, Daniel S. Lankford stepped down as CEO of Lucent Microelectronics Europe, one of Lucent's high-flying chip divisions, to chair Bolder Technologies Corp in Golden, Colo.—the company that's developing the incredible shrinking lead-acid batteries. "I had no interest in the battery business or Denver, but this tech-

LIGHTENING UP CAR BATTERIES

Most car batteries consist of six cells, each with positively and negatively charged electrodes that react with a chemical known as an electrolyte to create an electric current. Bolder's mission: Shrink cells, and shed weight.



In normal car-battery cells, the negative and positive electrodes are heavy lead plates divided by plastic separators. But this approach requires a lot of space and results in batteries that weigh about 40 pounds.



Bolder's breakthrough was to flatten the lead plates and coil them tightly together into new cells that start the car. A smaller, separate battery powers lights, wipers, air conditioning, and other gizmos. The two new batteries combined are half the weight of an ordinary car battery.

"Nobody has seriously come to market with an excellent replacement for lead-acid—until now," boasts Kanode

nology is unique," says Lankford. "It seemed too exciting to pass up."

Of the two, Kanode may be taking the bigger gamble. The industry has toyed with nickel-zinc for half a century. But high material costs and poor performance have kept such batteries out of the mainstream. The chemical compound is more energy-dense and is less toxic than lead-acid. But the batteries tend to drain quickly and expire after being recharged just 50 to 100 times.

Evercel's patented solution involves adding calcium to the zinc electrodes to thwart chemical degradation. That boosts the number of charges and lets Evercel pack more power into a smaller battery. Kanode says the new batteries weigh half as much as lead-acid and run up to three times as long on each charge. "Nobody has seriously come to market with an excellent replacement for lead-acid—until now," boasts Kanode.

This one innovation could open up a whole new category that includes electric bikes and scooters. Such vehicles have bombed in the past, mainly because a typical model must be recharged every 25 miles. Gasoline-powered equivalents can travel eight times as far on just a five-gallon tank. Evercel can't match that. But Kanode says the new batteries will do 50 miles per charge—and last five times as long as the lead-acid variety.

SKEPTICISM. Such projections have attracted attention in academic circles. "At the moment, this is the best chance we have at getting an improved electric bike," says Alvin J. Salkind, director of the Battery Materials Laboratory at Rutgers School of Engineering, who has examined the batteries. Such vehicles would be especially appealing in those parts of Asia and Europe where automobiles don't rule all the roads. In the U.S. "we're not going to have 100 million bikes," says Salkind. "But you might see that in a place like China." In preparation, Evercel has purchased a 51% stake in Xiamen Three Circles Battery Co. in Xiamen, China, and it expects to announce orders for its nickel-zinc batteries by the end of the summer.

Skeptics say nickel-zinc is too expensive to justify most of the product ap-

plications Evercel has in mind. And there are other problems: The batteries tend to spawn chemical growths called dendrites, which cause them to short. "If they've solved that problem, they've made great progress," says Joel P. Tax, an analyst at Santa Clara Consulting Group in Santa Clara, Calif.

Kanode says the problem is ameliorated by adding calcium, and by the sealed construction of the battery. He's already looking beyond scooters and bikes, to next-generation lawn mowers, wheelchairs, and power tools. Kanode is also eyeing a hybrid product that could work in conjunction with traditional car engines. "For years, no one

pack that's normally hauled to place on a small truck. In the next months, the company will come out a lighter 10-in. unit for jump-starting cars that can sit in a trunk for a while without losing all its juice.

CRANKING POWER. Car batteries are the logical next step for Bolder. Lankford says a 5-lb. Bolder battery could replace the starting function of a car battery. But Bolder is backed by an exclusive license contract with Johnson Controls Inc. that prevents it from selling car batteries. Until now, it has been looking for other markets as a cordless tool.



The Promise of Evercel

Scooters could run a long way—
at low cost—on nickel-zinc batteries

PROPULSION SOURCE	INITIAL COST	RANGE (MILES)	NUMBER OF CYCLES	LIFETIME COST*
NICKEL-ZINC	\$450	50	50	\$525
LEAD-ACID	150	25	100	1,575
GASOLINE	20**	195	n/a	2,500

*25,000 miles

**Cost per 5-gallon tank at European prices

DATA: EVERCEL INC.

could take this technology beyond 100 cycles, but now we can," says Kanode, 49, who gave up a job as president of North American operations at Varta Batteries Inc. to join Evercel.

Lankford, 53, sounds just as bullish as Kanode. Instead of replacing lead-acid, he plans to increase its power density by coiling thin sheets of metal into compact cylinders (figure, page 87). The result: about five times the power density of other rechargeable batteries. (Carmakers are looking at a number of ways to boost battery power but say it's too early to endorse any of the new technologies.)

Bolder's first foray into the market this fall will be compact jump-starters for cars that cost about \$130. Last year, at the annual Oshkosh (Wis.) air show for small-plane enthusiasts, a Bolder battery was used to start several of the planes. The device was just 13 inches long and weighed less than 6 lb. Yet it managed to replace a heavy battery

ed production line is ready to produce 4 million batteries a year," he says. "Things are starting to happen."

Bolder isn't alone in trying to advance lead-acid technology. Exide Corp. in Reading, Pa., the world's largest producer of such batteries, has found a way to

battery plates together, thus increasing the cranking power and shelf life of the product, which hit the market in 1998. It also has new safety features that allow it to be placed anywhere in the car. "The architecture of the car is changing and batteries have to change, too," Michael E. Greenlee, Exide's vice president for engineering quality.

Not surprisingly, Greenlee is skeptical that Bolder's approach will lead to a new scale car batteries. Bolder engineers admit that Exide can't match their technology. And neither company can yet endorse Evercel's nickel-zinc application. In fact, all three approaches have yet to come. For example, none is ready enough right now to serve as a primary battery for an electric vehicle. But they won't stall the momentum that's building in this long-neglected arena. In the short months, consumers will have a chance to road-test some of the technologies themselves.

By Diane Brady in Greenwich, Conn.



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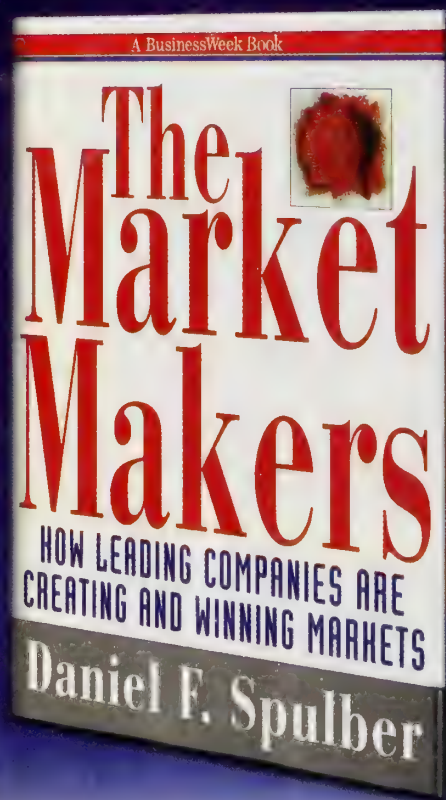
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BY CATHERINE ARNST



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Evelyn L. Wright

SMART 'BOTS GO WHERE NO MAN HAS GONE BEFORE

NASA'S DEEP SPACE 1 MISSION was launched Oct. 24, bound for a July 29 rendezvous with Asteroid 1992 KD. The spacecraft was put on a trajectory to take it within 6 miles of the 2-mile-wide body, the closest approach ever to an asteroid. But the mission's main purpose was to test a potful of new technologies. One, Remote Agent, is an artificial-intelligence program that can solve problems on its own. It can even revise the mission plan when it spots unexpected opportunities for new scientific discoveries.

Remote Agent has already passed its tests with flying colors—so much so that NASA wants to send an armada of small, autonomous robots to explore other planets. Because they'll be on their own, these robots must be smart enough to cope with the unexpected, says Kenneth M. Ford, head of information

technology at NASA's Ames Research Center at Moffett Field, Calif. Remote Agent proved its mettle when NASA tried to fool it by telling a sensor to relay spurious data. The AI program realized something was amiss and ignored the sensor.

While investigating other planets, NASA's smart robots would also locate sites suitable for human colonies. And if an asteroid is spotted on a



collision course with Earth, NASA would dispatch smart spacecraft to blow up the asteroid—or nudge it off course. If Earth is threatened by a catastrophe from space, "it will be our machines that will save us humans," says Ford. *Dennis M. Blank*

WHY A MAN-MADE CANCER CELL IS GOOD NEWS

IN A MAJOR STEP FORWARD in understanding cancer, scientists have for the first time been able to transform normal human cells into cancer cells. In the July 29 issue of *Nature*, researchers at the Whitehead Institute for Biomedical Research in Cambridge, Mass., report that they were able to pinpoint the genetic switches that can transform a healthy cell into a killer. Their discovery provides an important new target for future therapies.

Scientists have long been able to turn mouse cells into tumor-forming cells by introducing several cancer-causing genes. Human cells, on the other hand, have always resisted such transformation. The Whitehead team, headed by pioneering cancer researcher Robert A. Weinberg, determined that the key difference between a mouse and a rodent was the gene that codes for telomerase, an enzyme that prevents cells from growing and dividing indefinitely. In mice, this gene is always on, while in humans it is switched off in most normal cells but switched on in most cancer cells. The scientists discovered that cells containing two cancer-causing genes did not transform into tumor cells. However, when the telomerase gene was added as well, the cells became cancerous.

The discovery, says Weinberg, will be useful for studying the process by which cancer spreads. It also could help scientists develop cancer models that will help determine why certain cancer treatments work on some mutated cells but not on others. "Right now it's all black magic," Weinberg says. "Over the next decade, we have the prospect of much more precise therapies."

WILL NET PRICING GO A LA CARTE?

INTERNET ACCESS NOW IS MOSTLY ALL-YOU-CAN-EAT. FOR a flat monthly fee, typically \$20, users can send or receive any amount of data. Flat-rate pricing isn't the norm just because consumers like it: Until now, there haven't been effective ways to tally up what people do online. Without such tools, Net service providers are reluctant to roll out advanced services, such as Net phoning, that customers would pay extra for.

Now, there's technology that could make tiered Net-pricing possible. Semantic Traffic Analysis software, developed by Narus Inc. in Redwood City, Calif., monitors traffic by type and tracks who sent it. That way, a simple E-mail, say, can be distinguished from a high-priority video stream. And it means you could be charged more for a crisper Net phone call or an encrypted message.

But to make this work, it has to be standardized. On July 28, two dozen companies, including AT&T, Hewlett-Packard, Oracle, and Sun Microsystems, have formed a standards group, and they're aiming for rules by yearend. That could lead to low prices for basic Net access, but higher fees for video and other fancy features.

Andy Reinhardt

EDUCATION

WIRING THE IVORY TOWER

But will online courses lower standards?

There was no applause or windy speeches at this graduation ceremony. No one walked across a stage in a cap and gown. For the five members of three-year-old Jones International University's graduating class, the big day was a click-through affair. As they sat in front of computers in their homes on May 17, cable entrepreneur and university founder Glenn R. Jones gave the keynote speech—video-streamed across the Net. The university's president then solemnly read out the names of those receiving master's degrees in business communications. After the ceremony, graduates—scattered from Colorado to Maryland—repaired to a chat room for a short reception.

Welcome to the latest E-revolution. Like shopping and trading stocks, taking college courses, or even getting an entire university degree, is something you can do from the comfort of your home. Some 1 million students will take courses at a distance, most of them online, in

1999, estimates International Data Corp. in Framingham, Mass.—a number expected to more than double by 2002. All those eyeballs have entrepreneurs such as Jones and former junk-bond king Michael Milken jostling for position alongside much of the traditional higher-education Establishment. "Everyone sees the train leaving the station and wants to be on it," says Columbia Business School Dean Meyer Feldberg.

The new cybereducators envision a world of opportunity as higher education is freed from the physical confines of the classroom. For-profits such as Jones are targeting workers who need retraining for the New Economy. They are banking on a vast market paid for

in part by employers, who hope "distance learning" will help employees to squeeze in more schooling around their jobs. Elite universities are hopping online to extend their franchises or even make money with new for-profit units to deliver courses over the Web.

Public colleges, meanwhile, see the Web as a way to serve working adults and to accommodate millions of Gen Y-ers expected to hit campuses over the next 10 years. "There's no way we can build enough facilities to meet the tidal wave of new students," says Charles B. Reed, chancellor of the California State University system. "If I can meet 10% of our students with technology, maybe we have a chance."

WHAT HAPPENED? Traditionalists worry that armies of students clicking their way through Shakespeare at home will

degrade learning traditions dating back to Socrates, in which lecturers and students engage in face-to-face dialogue. "Ten years from now we will look at the wired remains of our system and wonder

how we let it happen," warns David F. Noble, a history professor at York University in Toronto.

But such concerns are rapidly being overwhelmed by the lure of the Web. Jones University (www.jonesinternational.edu), which became the first online-only university to gain accreditation this spring, already has 600 adult students who pay \$4,000 a year, vs. \$3,200 at the average state college. Jones has no overhead for dorms or sports fields. And each course is a standard product taught by adjunct instructors instead of costly tenured professors. Still, Jones won't be profitable unless enrollment hits a projected 3,000 in two years—a tall order for a col-

No dorms, no sports fields, no costly professors

Colleges Are Moving Into Cyberspace

THE TOP TIER Stanford, Columbia, NYU, Wharton, and others are linking with for-profit startups to start their own units to deliver courses online. The goal: Hike revenue by reaching a broader base of students. The risk: Diluted product—and reputation.

MASS-MARKET STATE SCHOOLS Public schools in California, Florida, Maryland, and elsewhere are using the Web to target working adults. The Internet will also help accommodate the millions of new students that will hit campuses over the next decade without massive new building. downside: Quality could slip.

THE ENTREPRENEURS For-profit startups, such as the University of Phoenix Online and Jones International, are targeting adult students. UNext, University Access, eCollege, and other startups hope to strike it big by repackaging courses taught at established universities.

DATA: BUSINESS WEEK



of thousands of courses—at roughly \$2,000 each—for their employees. UNext isn't yet accredited but has signed up IBM as its first client. "Students around the world are starved for U.S. education," says Donald A. Norman, head of UNext's business school.

Some elite universities are also launching their own cybercolleges. Most are aiming at professionals who want to learn engineering or business. The goal: to tap new sources of revenue and enhance the school's prestige. Last year, for example, Stanford, which has long offered televised engineering courses to 300 technology companies, launched a Web-based master's degree as well. Duke University is marketing an \$89,000, 19-month Internet-based executive MBA program, including 11 weeks of residential stays at four campuses around the globe. And NYU and Columbia have set up for-profit divisions to offer noncredit courses on the Net.

Large public college systems see the Web more as a low-cost expansion tool than a profit center. Cyber-ed provides a new solution for already overcrowded state colleges, which expect applications to jump by up to 20% by 2008 as Gen Y graduates from high school. Public colleges also hope that the Web will help them serve adults, who comprise 45% of college students today.

BEST MINDS. Already, cyberlearning is up and running in a big way at state college systems in New York (www.suny.edu), Maryland, and Pennsylvania, all at the same price as on-campus courses. New York's five-year-old program will offer 1,000 online courses this year. The University of Maryland (www.umd.edu) has some 10,000 students taking online courses in everything from English to engineering. The University of Maine even offers online biology: Students are overnighted fetal pigs to dissect.

How the Web will affect educational quality is the big question. Some advocates believe it will allow millions of students to tap into courses designed by the world's best minds. True, online

ing to build a reputation from

for-profit University of Phoenix (phoenix.edu) has already met that goal. Its online arm teaches more than 100,000 students everything from algebra to computer science. The move is a natural one for a company that is the country's largest private university with 65,000 students on 81 campuses offering older students the flexibility of year-round enrollment and campuses near freeway exits. UNext's \$1,460-per-course online tuition is slightly more than most state schools and like Jones, it has low overheads. Its parent, Apollo Group Inc., is expected to break out online profits, but the company as a whole earned \$46 million in revenues in 1998.

Palmer, 36, of Riverside, Calif., is a typical U. of P. cyberstudent. A father of four who dropped out of college, he works as a Lucent Technologies sales rep during the day. At night, he uploads course work on his home computer to complete his BA. Palmer uses e-mail to do joint projects with professors and to ask questions of a tutor, called a "facilitator." "For me, it was the only way, since I can't

afford the time to go to class," says Palmer, whose tuition is paid by Lucent.

A slew of other players have sprung up to emulate the U. of P. Several, like textbook publisher Harcourt Brace, are trying to create entirely new universities online. More than a dozen other startups, including Milken-funded UNext.com, eCollege.com, and University Access, are partnering with traditional institutions to create cybercourses aimed at working adults.

Two-year-old UNEXT is one of the most ambitious. It has assembled a roster of Nobel laureates as board members and has given financial stakes to five universities so far, including Stanford and the University of Chicago. In exchange, the universities' leading professors are working with UNEXT staff to adapt their courses into slick multimedia packages. The courses, such as accounting and finance, will have video-streamed lectures from the star professors, but part-time instructors will answer E-mails and grade assignments.

UNEXT is shelling out more than a million to create each course. It hopes to recoup the cost by getting companies to pay for thousands or even hundreds

interaction can never compete with a charismatic professor teaching a class of 15. But that's not what most students get in many night colleges or 500-student undergraduate classes. For mature students who know what they want to learn, Web courses can be effective if done well.

Cybereducation also raises questions about academic standards. Traditionally, professors create courses and own the rights to textbooks they write. Now, they are being asked to help design on-

line courses that universities want to co-own or even own completely. This could undermine academic freedom if administrators or private companies control what's taught and how. Recently, the University of Washington scaled back its online effort after faculty members protested, citing fears of loss of independence. "Online courses require new policies, and there is real potential for conflict if not handled well," says Pennsylvania State University President Graham B. Spanier.

Initially, online courses may be consistent quality as colleges fee way into a new world. But in the too distant future, many students find that the hallowed halls of academia look a lot like their own living room.

By Kathleen Morris in Los Angeles

BusinessWeek **ONLINE**

For more, see our Special Report: Business Education: Learning to Work Together
www.businessweek.com/today.htm

CYBERSPACE LEARNING: I GIVE IT AN A-

How do you study with Hollywood's screenwriting greats when you live in Chicago?

After an abysmal stint with a local screenwriting teacher, I stumbled

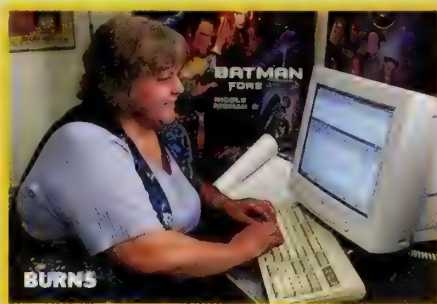
onto the Professional Program in Screenwriting Online at the University of California at Los Angeles—the electronic alternative to the renowned bricks-and-mortar version. Assured by administrators that the virtual seminar would have all the heft of the real thing, I plunged in, paying my \$3,000 (same price as offline).

Then, last September, an E-mail alerted me about our first class. Firing up my 56K modem, I dialed into the UCLA server at 3 p.m. Pacific Time and clicked on the button for my chat-room-cum-lecture-hall. Inside, my classmates bobbed on the screen in an Orwellian sea of flickering black type. I wondered how we were going to have any *Dead Poets Society* moments like that. But Judy Burns, our teacher and a seasoned Hollywood story editor, had a talent for using her keyboard to generate that captain-oh-captain encouragement: "I'm just an old lady now," she told us, "dedicated to making great screenwriters out of all of you." I could just picture her in the classroom, arms flailing at the podium.

In our virtual schoolhouse, protocol was paramount. Instead of raising our hands, we typed !. When we were finished commenting, we indicated so with a /. We could be hap-

py—). We could be sad—:(. We could pass notes (by clicking on the name of the person we wanted to whisper to). But we rarely flirted—;). Sometimes, with the other faculty who occasionally taught us, we could even get in trouble: "MICHELLE I TOLD YOU TO USE PROTOCOL NEVER INTERRUPT AGAIN EVER PLEASE/," :(, I whispered.

At first, I



ONLINE ADVANTAGES

One teacher thinks online students may be more dedicated: UCLA attendance in cyberspace is 95%, vs. 80% on campus

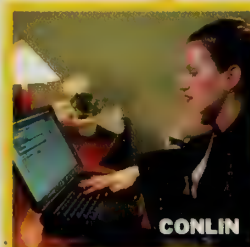
thought the online medium would bleach the class of personality. I found the opposite was true: All that white space gave us great practice for writing snappy one-liners. One night, when an Internet service provider kept kicking my classmate Lynda out of the room, another student, Anjum, quipped: "She's going through her existential phase."

Online had other advantages over the offline world. On campus, stu-

dents usually read each others' work in a mad rush when they arrive in class. Online, we had our own message boxes where we posted scenes two days before class. This meant that we had all considered each other's scripts before we convened and had our critiques ready. Jim Schmere, another UCLA teacher, has even come to think that online students are more dedicated than those on campus. He says UCLA attendance in cyberspace is 95%, vs. 80% at the real-life school.

NOTHING MISSED. I'm also a big fan of the school's logging feature, which allowed me to save the class on my hard drive. No fears about missing that single brilliant note that would turn a limp scene into a zinger.

I'm still a staunch advocate of the flesh teaching for those who swing it. After all, I never got to swap stories with my cyberpals in some smoky watering hole. But I did get my first feature-length screenplay doctored by the finest Hollywood's old hands. And I did need to suffer another dud instructor in Chicago. (I have since moved to New York.) Plus, I experience



certain fin-de-siècle dissatisfaction. Plugging in to class from motel rooms and cybercafés across the country, I felt as though I was a part of some educational cabaret complete with my own password for admission. It wasn't *Dead Poets Society*. But it was a new kind of society—just one that hadn't yet had its day in celluloid.

By Michelle Conlin in New York

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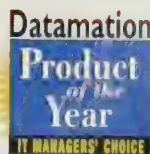
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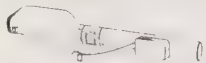


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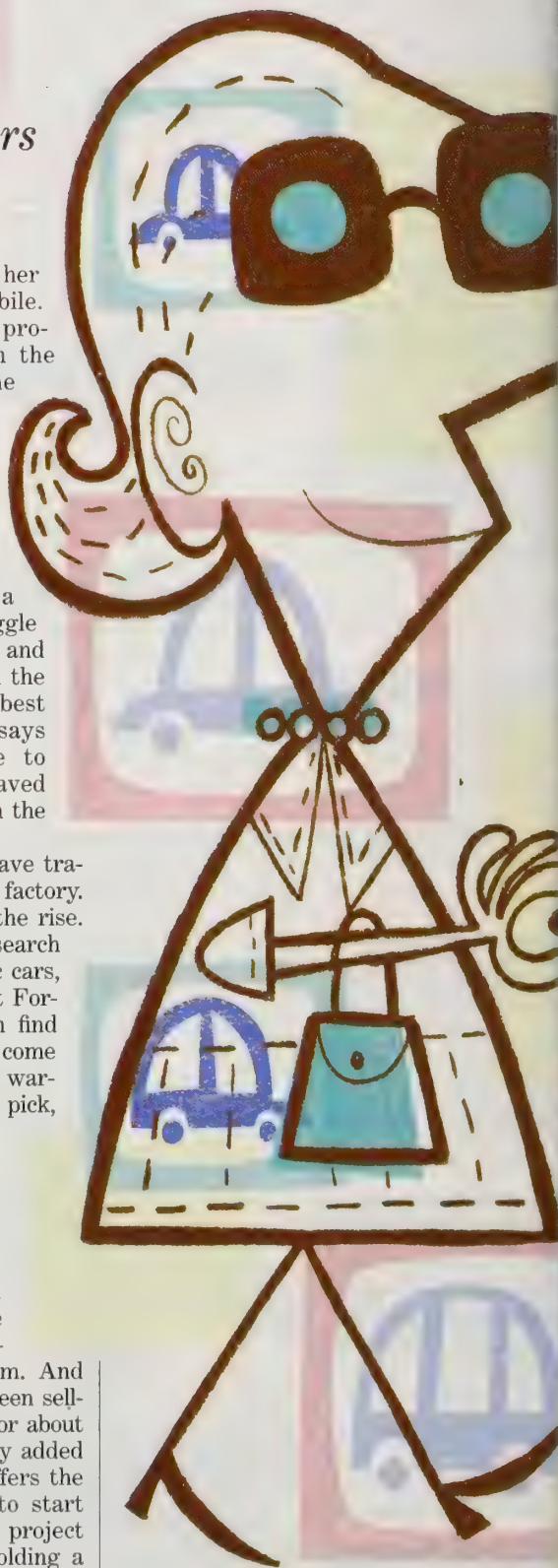
The Net offers tire-kickers plenty of help

BY EDWARD C. BAIG

Barry Queen knew his wife had her heart set on a specific automobile. Problem was, Ford no longer produced a Lincoln Continental in the pearl color she craved. So the Framingham (Mass.) lawyer went online, to the Ford Pre-Owned Showroom Web site. "Guess what was sitting on the Net?" Queen says—a low-mileage, fully loaded 1998 model in just the shade he was looking for. Queen examined color photos of the car's interior and exterior and clicked on a "sticker" listing its options and no-haggle price. He then keyed in his credit card and chose a nearby dealer where he wanted the car delivered. "Do I think I got the best deal I could have? Absolutely not," says Queen, who admits to paying close to \$30,000. "But the money I may have saved negotiating with the dealer wasn't worth the aggravation."

Car shoppers who rely on the Web have traditionally bought models fresh from the factory. But Internet sales of used cars are on the rise. The Net can help you choose a model, search available inventory, and evaluate specific cars, says James McQuivey, a senior analyst at Forrester Research. What's more, you can find low-mileage luxury cars that have just come off lease—with time remaining on their warranties. And once you've settled on your pick, you can apply for financing online.

Consumers have lots of places to shop for used cars on the Net, from sites such as Cars.com, which posts newspaper ads, to eBay, the Internet auctioneer (table). Two of the largest sites, AutoConnect and Trader Online (www.traderonline.com), recently announced plans to merge in the fall, creating a mega virtual used-car lot to be known as AutoTrader.com. And Ford Pre-Owned Showroom, which has been selling used Fords, Lincolns, and Mercurys for about a year, is expanding its reach. It recently added New York to the four cities where it offers the service. General Motors had planned to start testing cybersales in Houston. But the project has hit a snag because Texas is withholding a license.



II, Forrester estimates that the number of cars researched or bought via the Internet will reach 17 million in 2003, up from 4.2 million in 1998. A recent J.D. Power & Associates survey found that 26% of all buyers of late-model vehicles (1994 model year and later) went online for help with the buying process. By contrast, only 12% of new-car buyers used the Net that way.

These numbers suggest that many used-car buyers still haven't realized how powerful a search tool the Internet can be. In fact, the Web has more to offer the used-car buyer than the new-car buyer, says Chris Denove, director of consulting operations at J.D. Power.

Your first step is narrowing the field of autos you would consider. Many sites let you read reviews of older models and can help you determine if a car of a particular vintage is mechanically sound. For instance, Microsoft's CarPoint site gave the 1995 Cadillac DeVille generally good reliability grades. But it indicated that failure of the rear strut, a part of the car's suspension, is a periodic problem. Even better, CarPoint estimated how much it would cost to fix it: \$75 for each of four struts, plus \$84.50 each for labor.

RUNNING THE NUMBERS. Once you've got a particular car in mind, lots of assistance is available to figure out how much it's worth. Check out Kelley Blue Book (www.kelleybluebook.com) or Edmund's (www.edmunds.com) to estimate a car's resale value, including all of its options. Edmund's also offers ratings on a 10-point scale of a car's comfort, safety, and other criteria.

With a model in hand, pore through the online classifieds to find a dealer or private seller who is within a reasonable distance of your house. You might love Mercedes-Benz or Ford Explorer, but you need one of the major car sites, such as CarPoint, AutoWeb, or Autobytel. They post ads from a network of dealers. Visitors to the Autobytel site will find exterior pictures of each specific car for sale, not just stock photos. If you're not sure what you can afford, you can type in the amount of cash you have to put down and your desired monthly payment. Then call up a list of vehicles that fit the bill.

Autobytel's "Certified Pre-owned

Autos

CyberStore" cars must be no older than seven years and mustn't have more than 75,000 miles on them. Vehicles are also put through a 135-point mechanical and operational inspection, that, among other things, checks for evidence of frame damage or odometer rollback. Autobytel says it reserves the right to audit dealers. When you get the car, you have three days to return it, after which you get a three-month, 3,000-mile warranty.

You might be put off at the AutoWeb site by having to provide your name, phone number, and other contact information before learning details about any cars up for sale, including their colors. The good news is, the site tells you if a car has been recalled or is the subject of a Technical Service Bulletin, so you can alert mechanics about difficult-to-diagnose problems.

If you're not sure of a particular car's pedigree, check out Carfax (www.carfax.com). Type in the 17-character vehicle identification number (VIN) and order a free "lemon" report. It will tell you if the car had major problems that caused the manufacturer to buy it back. You can purchase more detailed Carfax reports, for \$20, that might reveal if a car has been damaged by flood or if its odometer has been fraudulently rolled back.

If you live in or near Tampa, you can chat online in real time with an Internet-only sales representative at AutoNationDirect.com. For now, that's available only in Tampa. But in October, the company plans to roll out the service to customers in the 20 states where it owns dealerships.

For buyers looking for financing, AutoNation has links to Giggo.com. Through this unit of DaimlerChrysler, approved customers are mailed a check voucher to present to the dealer the

You can type in a car's vehicle ID number and get detailed info on past damage

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next business day. Giggo is offering used-car rates of 8.15%, roughly 1½ points better, it claims, than the national average.

BankAmerica's Price Auto Outlet lets you finance the off-lease Jaguars, Mercedes, Hondas, and Toyotas it sells or leases through links to the bank's CarFinance.com site. Price Auto Outlet has dealers in Linden, N.J.; Bethpage, N.Y.; Fort Lauderdale; and Anaheim, Calif.

HAGGLE AMMO. But what about price? How can you get a fair deal online? The no-dicker price promised at sites such as Ford Pre-Owned Showroom and Price Auto Outlet may be higher than one you would negotiate yourself—as Queen discovered when he bought his wife's Lincoln Continental. Yet one of AutoConnect's sales pitches is that with more than 900,000 classifieds (mostly from dealers), you'll be armed with the best pricing information on any given car—and that should give you a competitive

edge. If a dealer doesn't arrive at a figure you can live with, you can always point out that through the Internet you know exactly what you can find a similarly equipped set of for a lower price.

Still, prices posted on the Web are no anteed, as Charles Whitson of Leander learned. Late last year, he almost bought a Chrysler New Yorker from a Dallas-area dealer he found through AutoConnect. Whitson was ready to pay the \$12,900 price quoted on the Internet, but the dealer jacked the amount by \$1,000 when he showed up in person. "The dealer was shocked at the price listed on AutoConnect and showed me a newspaper with a higher price," he says. Whitson disgusted he bolted the lot.

The Internet can be extremely helpful in collecting information. But in the end, it's a handshake that counts.

WANNA TEST-DRIVE A DEALERSHIP STOCK?

Even if you're not in the market for a new or used car, the auto industry has something else you might like to buy: stock in an auto dealership. A growing number of publicly traded dealership companies are snatching up mom-and-pop outfits, creating greater efficiency and placing more emphasis on higher-margin servicing and auto-parts businesses. The trend's boosters say the consolidation will help big dealerships weather future downturns. Meanwhile, they have hit some bumps in the road recently, so their stocks are a bargain.

ECONOMIES OF SCALE. The new-style dealership companies typically acquire a leading dealer in a market and leave its management intact. Then they buy other local auto-sales operations, handing management over to the first

team and consolidating overhead, supply, and advertising expenses. These companies have "recognized the opportunities to make economies of scale and generate strong returns for their shareholders," says Tom Thomson, an auto-retailing analyst at First Union Capital Markets in Richmond, Va.

The largest company in this mold is New York-based United Auto Group, with \$3.3 billion in sales (table). While UAG's stock tumbled 75%, to 5%, early

this year on management woes, it has yet to recover all the lost ground. Analysts are upbeat. The company has a new team in place in May, naming former race-car driver and industry insider Roger Penske chairman. It recently posted a 7.5% gain in its third-quarter net profit, to \$8.6 million, and earnings are expected to grow from 98¢ a share this year to \$1.10 next year.

ON THE REBOUND. Group 1 Automotive in Houston and Sonic Automotive in Charlotte, N.C., are also showing strong earnings growth as operating margins improve. Group 1's margins have risen to 3.1% this year from 2.5% the year before, according to Jordan Hymowitz of BancBoston. Sonic's margins have risen to 3.1% this year from 2.5% the year before, according to Robertson Stephens. The companies are getting more of their profits from servicing business as well as products such as auto insurance and

leasing. Group 1's second-quarter profits rose nearly two-thirds, to \$9.2 million, while Sonic's more than doubled, to \$10.1 million. For the year, Group 1's earnings per share are expected to hit \$1.10 and then rise to \$1.73 next year. Sonic's earnings, forecast at \$1.10 per share this year, should hit \$1.39 in 2000.

If this trend continues, the companies should provide engines of growth for investors.

David A.



Lots on the Block

COMPANY (SYMBOL)	STOCK PRICE*	52-WK. HIGH	P-E**	COMMENT
AUTONATION (AN)	15½	24½	13.7	New- and used-car superstores, rentals
GROUP 1 AUTOMOTIVE (GPI)	23½	29	15.7	More than 80 dealers in six states
SONIC AUTOMOTIVE (SAH)	14¼	18½	13	45 dealerships, 60 buyouts pending
UNITED AUTO GROUP (UAG)	12¼	23½	12.63	More than 60 dealers in 16 states

* July 26 ** Based on 1999 estimated earnings

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Time to Swap 'n' Save?

Exchange funds can postpone your tax bill

BY TODDI
GUTNER

If your wealth is concentrated in a few stocks you bought before the equity market took off long ago, you may want to diversify. But doing so would mean selling some of those low-cost holdings and facing huge capital-gains taxes.

You can broaden your portfolio and temporarily avoid this tax hit through an exchange fund. These increasingly popular private placements have recently attracted some \$5 billion. Investors with large holdings in a highly appreciated stock can swap a portion, typically 20%, for shares in a diversified pool. Since this is a trade, investors entering a fund don't owe capital-gains taxes until they sell the holdings.

Anyone who wants to invest must have liquid assets of at least \$1 million—and, in some cases, \$5 million—above the contributed shares' value. Money managers and banks such as Bessemer Trust, J.P. Morgan, Eaton Vance Management, Salomon Smith Barney, and Donaldson Lufkin & Jenrette offer the funds.

How It Works

Say you bought 6,300 Microsoft shares in December, 1994, at \$7 each. If the stock were at \$100, your holdings would be worth \$5 million. If you sold 20%, or \$1 million worth, you'd pay \$200,000 in federal capital-gains taxes, plus any state levies. Here's how to diversify and avoid the immediate gains:

- ▶ Take the 20% of your shares and contribute them to an exchange fund. In return, you get an interest in a diversified stock portfolio and pay no capital-gains taxes.
- ▶ Your fund ownership equals the amount you contributed. So if the fund has \$100 million in assets, your \$1 million in Microsoft shares gives you a 1% interest.
- ▶ After seven years, you can withdraw your portion of the fund.

DATA: BESSEMER TRUST CO

Exchange funds have some limitations. The Internal Revenue Service says 20% of an exchange fund's holdings must be illiquid. To meet the requirement, most funds buy special securities called partnership preference units, or UPREITS, issued by real estate investment trusts. Shares in the diversified portfolio are locked up for seven years, unless you die or the company whose stock you contributed merges with another. You can get your original contribution back before seven years, but then you'd be back where you started.

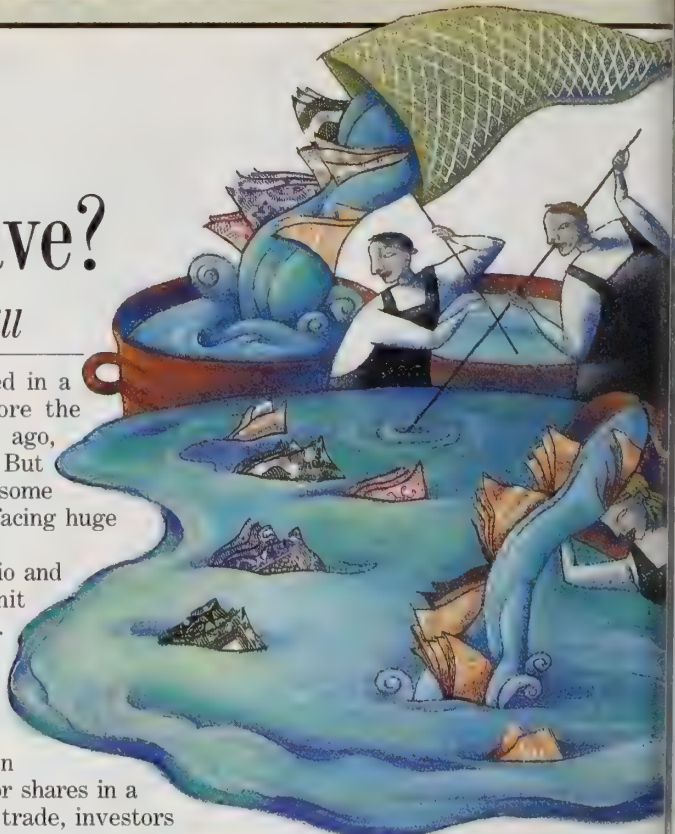
At the end of the seven years, you can receive a diversified basket of stocks. You will pay capital-gains taxes if you choose to sell some of those shares, assuming you have gains. For example, say you own 10,000 Microsoft shares that cost you \$7 apiece, or \$70,000, that are now worth \$100 apiece, or \$1 million. You hand them over to the fund and get an interest in a diversified portfolio that could include stocks such as Coca-Cola, IBM, and General Motors. Seven years later, you withdraw this

stock portfolio, sell the IBM shares, and pay capital-gains taxes. Your cost basis on those remains \$7 apiece.

If you want to invest in an exchange fund, the minimum is typically \$1 million in stock, can be as little as \$500,000 or as much as \$5 million. Large-capitalization, household stocks are the focus of most funds, but a few mid-caps. Some managers will only accept of a company with three years of profits. Funds close their doors after they reach a size and asset mix. Look for a manager with well-defined goals and is clear about which will achieve them. "You want to know what of fund you're investing in because it's your asset allocation for seven years," says Rodriguez, an attorney for J.P. Morgan.

LIMIT DILUTION. Look for managers who delivered good returns. After fees, Bessemer Trust's Meadowbrook Equity Fund, for example, has had an annualized return of 34.6% since its inception in November, 1995, through 1999, vs. 28.1% for the Standard & Poor 500 stock index. "The secret is to balance performance over time," says Bessemer Trust's Donald Herrema.

If you're considering an exchange fund about your stock's future before you contribute. "Make sure you're not diluting upside potential that is left in your stock," says Rodriguez. If you live off dividends, exchange funds are good because they reinvest their dividends. Exchange funds aren't cheap. Investor onetime fee of up to 2% of the value of the contributed, plus an annual management fee of 0.65% to 0.80% of total assets. But if a diversified portfolio is what you're looking for, this might be right.





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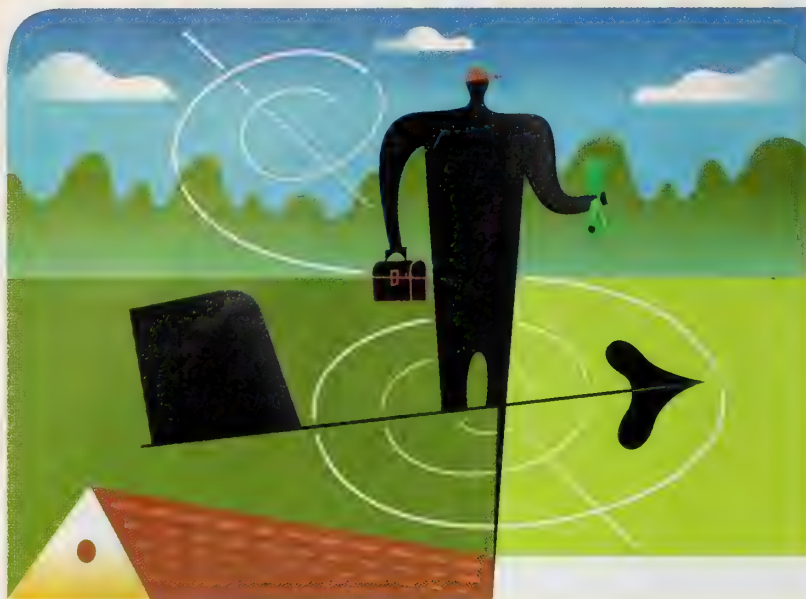
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A Market-Rocking Day

The employment report can unleash a frenzy

BY KATHLEEN
MADIGAN

For Wall Street, labor day comes the first Friday of every month, when the Labor Dept. releases a treasure trove of job-related data called the employment report. Unlike the lazy national holiday in early September, though, Wall Street's labor days are marked by a frenzy of buying and selling. With rare exceptions, stocks are most volatile immediately after the job numbers are released. Goldman Sachs Senior Economist Edward McKelvey calls the monthly statistics "the undisputed champions of price movements" in the equity markets. And the employment report's effect on the bond market is equally great.

If you want a sense of what's going on in the economy and the labor markets, ignore the report's most widely reported stat—the employment rate. It's a lagging indicator that tells us where the economy has been. Instead, focus on the change in nonfarm payrolls, hours worked, and hourly pay. These numbers tell you if the economy is speeding up or slowing down and whether wage pressures may be a cost problem for companies whose stock you own.

The employment report is composed of the Current Population Survey and Current Employment Statistics—commonly referred to as the household and payroll surveys. The household survey, based on interviews at 60,000 residences, figures the unemployment rate, or the percentage of jobless people in the labor force.

PAYROLL POWER. But while that rate makes headlines, stocks are more vulnerable to news from the payroll survey. It collects data on jobs, hourly wages, and the number of hours in the workweek from about 400,000 companies covering nearly 500 industries. The total change in payrolls reflects shifts in economic activity. A big gain means companies are hiring in response to rising sales. A job decline hints that companies have so little business they must let people go. Wall Street also examines separate industry reports to see what is happening in different sectors. For instance, a drop in hours worked in the retail sector suggests that consumers weren't shopping as much. Retail stocks could then take a hit.

The employment report also affects the bond market because excessive economic growth can spawn inflation fears. Using data from 1966, Alan Krueger, an economics professor at Princeton University, found that if payrolls were 200,000 more than expected, the yield on a year Treasury bond rose 7.6 basis points, the one-year rate rose 14 points, and the 10-year rate edged up 9.4 points. Higher inflation rates often have a negative impact on stock prices.

Because the employment report can move markets sharply, the Labor Dept. gives a heads-up to the head of the Council of Economic Advisors

the afternoon before the Friday release. The Federal Reserve Chairman Alan Greenspan receives it that evening. But the Treasury Secretary Alexis Herman doesn't get the report until Friday's "lockup" period, a half hour before the official release. When financial journalists huddle in the morning at the Labor Dept. in Washington to pore over the numbers and prepare their stories. At 8:30 a.m. promptly, the report reaches the public, usually touching off a flurry of stock-market activity. Some investors prefer to trade on days when the markets are quiet, better than the hectic Friday of the month like Labor Day. They take the day off.

This is the second in an occasional series of stories explaining how major pieces of economic data can affect the stock and bond markets.

Employment Measures

EMPLOYMENT REPORT

MONTHLY Compiled from two surveys taken by the Labor Dept. The Current Population Survey (also called the household survey) asks about the working status and jobs of every adult. The data are used to calculate the unemployment rate. The Current Employment Statistics (or payroll survey) comes from information nonfarm businesses supply on their total number of jobs, hourly wages, and average workweek.

INITIAL UNEMPLOYMENT CLAIMS

WEEKLY (on Thursdays) Counts the newly unemployed who file to receive state unemployment benefits. A rise in claims is viewed as an early sign of trouble in the labor market.

HELP-WANTED ADVERTISING

MONTHLY The Conference Board totals up the volume of help-wanted ads in newspapers in 51 major cities. The index is considered a measure of the demand for labor.

: logged on to RealEstate.com: 27 seconds

: searched for the perfect home: 12 minutes

: applied for the lowest rate mortgage: 7 minutes

: waiting for movers to arrive: 5 hours, 17 minutes and counting



RealEstate.com

The easiest part of getting a home.

YOUR OPTIONS ON OPTIONS



BY ROBERT BARKER

Employee stock options. Everybody without them wants some, and anyone with them wants more—at least until some bear market slouches our way. Yet if you're an optionnaire, I'll bet you've cursed those babies, because knowing when to turn them into something bankable is becoming a national annoyance.

That's why fresh research on how to exercise employee options caught my eye. Western Kentucky University in Bowling Green may not be the first place you'd look for help in this area. Turns out, though, that two clever accounting professors there, Joel Philhours and Charles Hays, are carving a niche on just such puzzles. Now, in June's *Journal of Financial Planning*, they offer a guide through the tax thicket of "nonqualified" options, the most common type, which grant employees the right to buy stock at a fixed price over a fixed term, often five to ten years. With the professors' aid, I've come up with a six-step worksheet to help you with the big question: Exercise your options now, or wait?

Before you dig in, you should know what Harold Evensky, a financial planner in Coral Gables, Fla., told me about the professors' research. "They did a very good job on it," he said. "What's missing is it

doesn't take into consideration overconcentration of a portfolio." In other words, if you're deciding when to use your stock options, take a broader view of your portfolio. See if your decision to exercise leaves you too vulnerable to risks in just one investment, your company's stock or any other.

That said, how can you use what Philhours and Hays have learned? Suppose you're vested in nonqualified options on 1,000 shares at \$50 a share. With the stock now at \$75 a share, you've got a paper gain of 50%—congratulations! But if it gets sticky. Suppose you expect the stock to continue rising. Do you exercise the options now to hold the stock? Lots of people—the professionals included—have assumed this is the best strategy. That's because Uncle Sam taxes your immediate gain on exercising at high, ordinary-income rates, while if you hold the stock a year or more, your later gains enjoy the lower capital-gains rates, usually 20%. So by exercising your options now, you get a lower tax rate on future gains.

THE FORMULA. Yet after doing the math, the pros found the capital lost by exercising is never recouped by later tax savings. If you borrow the cash to exercise your options, the cost only makes matters worse. Exercise to escape a higher tax rate, Philhours told me, "you're going to come out behind."

That leaves two choices: Cash out to reinvest elsewhere? Or hold your options until they expire. Which will leave you richer depends on two numbers. You already know the first: your percentage paper gain on your option stock. Our hypothetical example, it was 50%. The second, set up with the second number is trickier: the ratio of how much you expect your option stock to go up, vs. how much you think an alternative investment will rise.

Forecasting investment gains is always a bit of an art, but if you're managing money, it's escapable. So suppose you think your stock will go up 50% and an alternative investment will rise 75%. That's a ratio of 50 to 75, or 2 to 3. Plug that into Step 4 of the worksheet, and you'll see that cashing out option stock with the current paper gain and reinvesting doesn't make sense. Why? The higher gain you expect from the alternative investment isn't enough to make up for an early tax bill that cuts your capital and saps its power to compound. The worksheet shows break-even ratios for a range of paper gains.

Confused? The pros offer this rule of thumb: If you expect your option stock to rise at least 80% as much as an alternative investment, it's better to hold than to exercise, no matter how high your paper gain. It's not this stuff impossible to keep in mind. I love rules like that. And that's why you take my advice, you'll rip out this page and stash it with your options.

For *barker.online*, go to www.businessweek.com/investor/ or AOL Keyword: BW Daily.

Exercise Now, Or Wait?

Use this guide to see if exercising your vested nonqualified stock options early makes sense:

1. By what percentage has the stock gained over the options' exercise price?
2. What further percentage gain do you expect in the option stock if you hold to expiration?
3. What gain over that period do you expect from an alternative investment?
4. Divide Step 2 by Step 3.
5. Check the table for break-even ratio.
6. If Step 4 is lower than the break-even ratio, exercising your options now and reinvesting make sense.

PRESENT GAIN ON YOUR OPTION STOCK	BREAK-EVEN RATIO
25%	16%
50	27
75	34
100	40
150	48
200	53
300	60
400	64
500	67
1000	73

DATA: JOEL PHILHOURS AND CHARLES T. HAYS, BUSINESS WEEK

QUESTIONS? COMMENTS? E-mail barkerportfolio@businessweek.com or fax (407) 728-1711

Tenth Annual Business Week Awards for Instructional Innovation

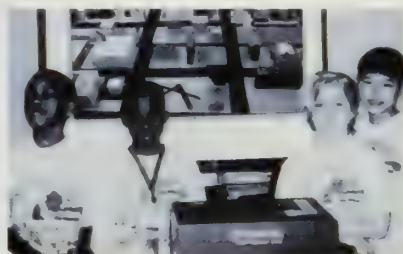
Business Week and the McGraw-Hill Educational and Professional Publishing Group in collaboration with the Council of Chief State School Officers selected 10 winners of schools that have contributed greatly to resolving the problem of achievement in American schools. These schools are: ensuring technology literacy for all; meeting national demands for high-tech workers; closing the gap between "haves" and "have nots"; making technology an investment rather than a cost; making sure that efforts demonstrate results.

The winning schools have each received a \$1,500 grant, of which \$750 is an honorarium to the institution for its dedication to technology education. The remaining half will cover expenses, as each school shares its winning approach with other educators at workshops and conferences. The awards were presented at the annual Conference Board meeting in San Francisco.

For more information on these schools' methods, you can request a copy of *Smart Links: Schools That Use Technology for Learning* published by the McGraw-Hill Educational and Professional Publishing Group.

Please contact:

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Fax: 212 512-4769
e-mail: cfrank@mcgraw-hill.com



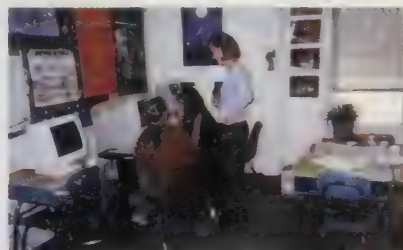
Oak View Elementary; High Point, NC



Le Grade School; Cartersville, IL



Jefferson Elementary School; Jefferson, LA



Perry Harrison Elementary School; Pittsboro, NC



Maria De Hostos I.S. 318; Brooklyn, NY



John Dewey High School; Brooklyn, NY



Rogers High School; Rogers, TX



Middle School; Shelbyville, TN



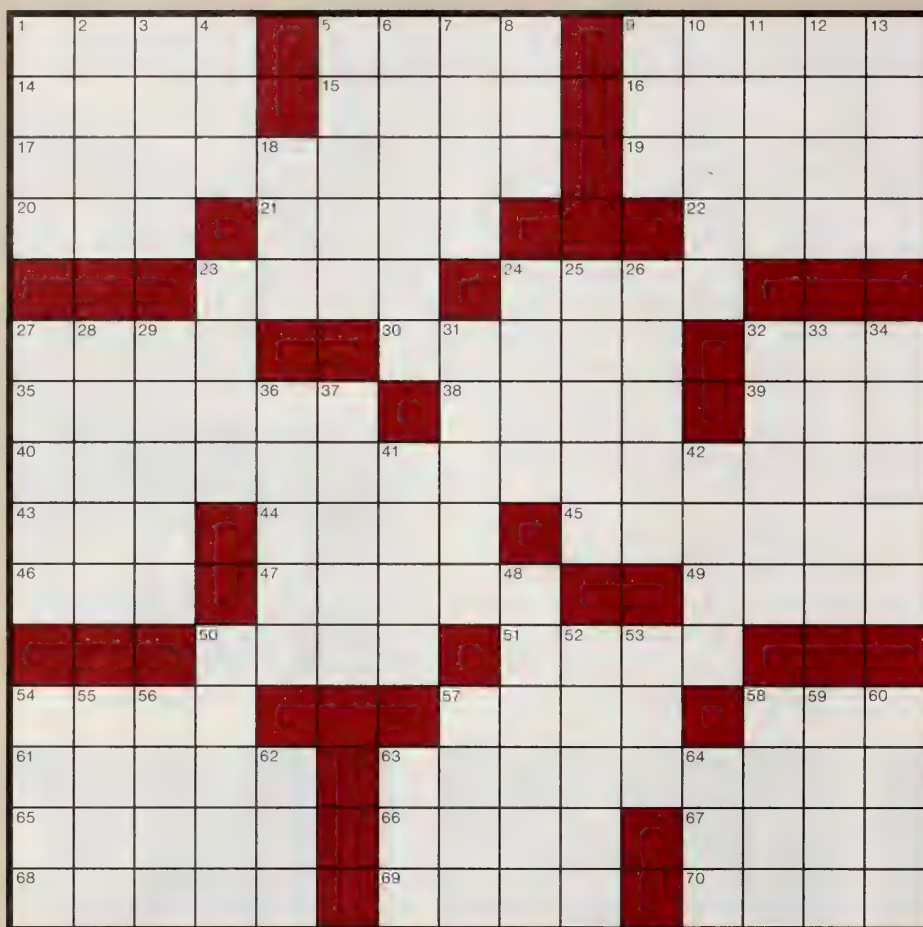
Lemon Grove School District; Lemon Grove, CA



Sprayberry High School; Marietta, GA

Mixing Business with Pleasure by Lincoln

Puzzle #15



ACROSS

1. Cable network part-owned by Disney
5. Fencing sword
9. Hard to see
14. Mediocre
15. Presidential prerogative
16. Borden's Mascot
17. Ivy League school celebrating its 253rd anniversary
19. "The Tyger" poet
20. "Go ahead!"
21. Part of an interest-calculation equation: Abbr.
22. They may be electric

23. Leave the company
24. Bar-code readers do it
27. Cad
30. Rose
32. Urban thoroughfares: Abbr.
35. __Signal
38. Santa __ (Luther Burbank's home)
39. __ polloi
40. Important employee benefits
43. Musical discernment
44. Where 63 Across is
45. Wilshire 5000 components
46. Single-stranded molecule
47. Warehouse platforms

49. Sign off on
50. '50s Hollywood studio co-owner
51. Iowa commodity
54. Technical-analysis term
57. Chicago exchange, familiarly
58. Alphabetic trio
61. Did some plant maintenance
63. Nation that's easing foreign-bank restrictions
65. More than like
66. Volatility measure
67. Free advertising of a sort
68. Do an office-party job
69. Trade group: Abbr.
70. One-liners

DOWN

1. Notice
2. Peeved
3. Greek letters
4. Smoking alternative
5. "If __ Would Leave You"
6. __ fours (fancy cookies)
7. Prince William's school
8. Very long time
9. Presidents' Day Sale time
10. Microsoft co-founder
11. Brit's exclamation
12. World's biggest shoe c
13. Golf-shop buy
18. Computer's "brain": A
23. Cunard's pride
24. Any day now
25. Comptroller's concern
26. Retool, as machinery
27. Not as common
28. Olestra brand
29. Prefix for conservative
31. " __ luxuriously" (see ad)
32. Radio __ (Tandy chain)
33. Big name in the truck
34. Actress Spacek
36. Remove data from a c
37. Office furniture
41. 1003, in old Rome
42. Bird on Canada's \$1 c
48. Perfumer's expertise
50. Tractor giant
52. Employee newsletter
53. Overtime owner of Ra House
54. British Airways' forme
55. Alvarez of 63 Down
56. Job opening
57. Architect __ van der R
58. What Seven Up isn't
59. Prozac or Norvasc
60. Brain scans: Abbr.
62. German article
63. Government agency for entrepreneurs: Ab
64. Lucite Paint manufact

For answers to this puzzle:

Turn to page 111 in this week's issue of Business Week or visit Mixing Business with Pleasure by Lincoln on www.businessweek.com (URL: www.businessweek.com/adsection/puzzlesbylincoln/index.htm)

Puzzle created by: Stanley Newman.

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Ever been on a train or walked into an air-conditioned building? Ever made a telephone call or switched on a light? Or eaten a meal? Then you'll already have come across Invensys. True, we're not exactly a household name. But there's hardly a household, an industry, an office or a business that doesn't rely on us already. As advances in technology make possible more comfortable homes and working environments, and hold out the promise of even more efficient manufacturing processes, so the effective control of such automation systems becomes even more critical. At Invensys, with a current market value of over \$19 billion, we're already a world leader in intelligent automation and controls. You could say we're the brains behind the muscle that powers the world. And you know who's going to reap the benefit of that? You are.



INTELLIGENT AUTOMATION • DRIVE SYSTEMS • POWER SYSTEMS • CONTR

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US\$ are quoted at US\$1.57:£1.

FRESH ASPECT



G. MARCIAL

Develop-
I remake
the Web.
ics bets
s Hewlett-
link. And
Software
new zing
Net unit

One date investors in Aspect Development (ASDV) won't forget is Apr. 5: The stock plunged 65%—from 22½ to 7½. Aspect, which provides manufacturers with a virtual catalog of millions of components from suppliers worldwide, had warned that first-quarter earnings would be lower than expected. The stock has since bounced back, and there's evidence of a turnaround in Aspect's business. The stock reached 23 on July 7; it closed at 18½ on July 27.

Some pros believe Aspect will catch fire in the next few days: It is expected to announce a remake of itself into a Web-based operator. Specifically, Aspect will unveil a series of online initiatives to give customers Internet access to its database of information about parts and where to get them, and to its proprietary software that helps manufacturers search the database and also helps manage their inventories.

One additional service: Aspect will facilitate—through a new Internet portal, AspectOnline—customer purchase of a wide range of products. Already, engineers at Motorola's computer group rely on AspectOnline, says Aspect Chairman and CEO Romesh Wadhvani. "We can put all the information on our database up on the Web where our customers can access it and get the very latest on upgrades and changes," he adds. The goal, he says, is to bring even greater savings to Aspect's customers in obtaining parts, which represent some 70% of the overall cost of a product.

AspectOnline will more than quadruple the size of the potential market Aspect can service, figures Wadhvani. Lisa Williams, senior analyst at technology researcher Yankee Group, says she is "impressed and optimistic" about Aspect's foray into business-to-business E-commerce. "It's the right move for Aspect, which is helping solve the difficult problem of directly sourcing goods," says Williams. Andrew Lanyi of Lanyi Research at CIBC World Markets, who increased his stake in Aspect to one million shares during the April slump, is convinced the stock will hit 100 in three years.

On Aug. 2, Wadhvani is scheduled to reveal to analysts details of Aspect's new Internet business strategies.

WALTZING WITH A HEFTY PARTNER

When Diametrics Medical (DMED) announced a deal on June 7 for Hewlett-Packard to sell its blood-testing systems worldwide, Diametrics stock leaped

from 6 to a high of 7½. But it has since slumped, closing at 5½ on July 27. Not to worry, say some big investors. "A lot of folks just don't get it yet," says one money manager, referring to the deal with Hewlett-Packard, which on July 15 acquired 5% of Diametrics stock, with an option to buy as much as 19.9% on the open market within 18 months.

"I would be surprised if Hewlett-Packard didn't end up acquiring Diametrics," says Jim Tilton, managing director at Trust Co. of the West, a California investment firm that manages some \$50 billion and owns some 5% of the stock. He believes Diametrics is important to Hewlett-Packard's game plan in the medical diagnostic-monitoring market, of which it controls 45%. HP plans to spin off its \$7.8 billion medical products unit in the fall. Speculation is that the HP medical unit will spur growth by tapping into the \$2 billion point-of-care diagnostic market. Diametrics' IRMA blood-testing system allows health-care providers to evaluate a patient's blood-gas chemistry at the bedside. And its Paratrend and Neotrend systems allow continuous monitoring of blood gas.

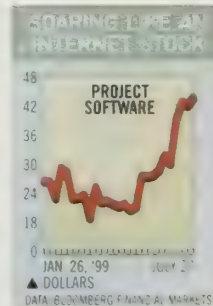
Diametrics also has alliances with Johnson & Johnson, which also owns 5%, and GE Marquette Medical Systems. Tilton figures that, with the HP pact, Diametrics sales could jump from \$12 million in 1998 to \$20 million in 2000 and to \$100 million in 2001. Analyst Justin Vaicek of Cruttenenden Roth expects Diametrics will be in the black by 2001.

SET TO SPIN OFF A WEB NEWBIE?

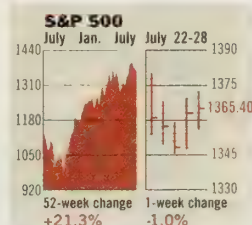
Project Software & Development (PSDI), which makes software systems that help businesses in maintaining their capital assets such as plants and production equipment, is certainly not an Internet stock. But of late it has been acting like one. Project's stock has more than doubled in price, going from 19½ on May 6 to 43½ on July 27.

Part of the reason: Project posted better-than-expected earnings for its third quarter ended June 30. The other driver: Some pros, in fact, consider Project an Internet play through a subsidiary called MRO.com. This unit complements Project's enterprise asset maintenance software with a Web network that links buyers and suppliers.

Catherine Moore of FAC/Equities, a unit of First Albany, thinks Project will spin off to shareholders its MRO.com operations. She figures that MRO.com, which she expects to post revenues of more than \$6 million in fiscal 2000, is worth \$500 million, or about 30 a share, based on the market value of its peers. Moore has raised her rating on Project to a buy, with a target price of 70 a share.



STOCKS



COMMENTARY

The market ended the week in slightly negative territory as investors dismissed strong earnings reports and balked at the possibility of rising interest rates. Major indexes regained some ground on July 27 and 28. The Nasdaq, in particular, benefited from money flowing into tech stocks. The long-term Treasury yield rose slightly.

Data: Bloomberg Financial Markets

U.S. MARKETS

	July 28	% change	
		Week	Year
Dow Jones Industrials	10,972.1	-0.3	22.8
Nasdaq Composite	2705.8	-2.0	42.7
Nasdaq 100	2333.8	-1.3	67.5
S&P MidCap 400	412.1	-2.1	18.7
S&P SmallCap 600	183.6	-1.1	2.5
S&P SuperComposite 1500	287.0	-1.1	20.0

SECTORS

	July 28	% change	
		Week	Year
S&P/BARRA Growth	767.2	-1.4	25.1
S&P/BARRA Value	619.2	-0.5	15.8
S&P Basic Materials	135.2	0.1	14.6
S&P Capital Goods	1026.5	-1.4	22.9
S&P Energy	848.8	-1.3	18.3
S&P Financials	142.3	0.0	4.2
S&P REIT	82.0	-1.6	-15.1
S&P Transportation	717.6	-2.4	5.8
S&P Utilities	256.3	-1.1	7.9
GSTI Internet	446.1	-5.3	171.0
Morgan Stanley Cyclical	596.5	0.2	20.8
PSE Technology	606.0	-0.9	74.3

BEST-PERFORMING GROUPS

	Last month %		Last 12 months %
Health-Care Services	18.1	Semiconductors	90.9
Semiconductors	16.6	Computer Systems	78.8
Computer Systems	10.5	Instrumentation	78.3
Oil & Gas Drilling	8.5	Specialty Appar. Retailers	70.8
Alcoholic Beverages	8.4	Communications Equip.	66.7

GLOBAL MARKETS

	July 28	% change
		Week
S&P Euro Plus	1310.6	-2.8
London (FT-SE 100)	6297.2	-0.5
Frankfurt (DAX)	5229.6	-3.4
Tokyo (NIKKEI 225)	17,579.9	-3.7
Hong Kong (Hang Seng)	13,140.4	-2.1
Toronto (TSE 300)	7111.2	-0.4
Mexico City (IPC)	5483.8	-6.4

FUNDAMENTALS

	July 27	Week ago
S&P 500 Dividend Yield	1.20 %	1.19 %
S&P 500 P/E Ratio (Trailing 12 mos.)	32.9	34.0
S&P 500 P/E Ratio (Next 12 mos.)*	24.4	24.6
First Call Earnings Surprise*	4.06 %	4.28 %

*First Call Corp.

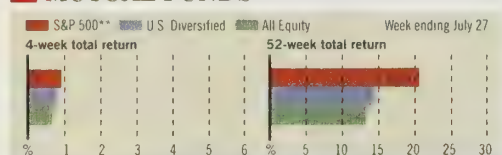
TECHNICAL INDICATORS

	July 27	Week ago
S&P 500 200-day average	1257.6	1248.1
Stocks above 200-day average	54.0 %	57.0 %
Options: Put/call ratio	0.56	0.45
Insiders: Vickers Sell/buy ratio	1.49	1.50

WORST-PERFORMING GROUPS

	Last month %		Last 12 months %
Pollution Control	-35.4	Manufactured Housing	-35.4
Shoes	-15.5	Metal & Glass Containers	-15.5
Transportation Services	-13.7	Pollution Control	-13.7
Manufactured Housing	-10.5	Toys	-10.5
Leisure Time	-8.7	Apparel Manufacturing	-8.7

MUTUAL FUNDS



Data: Morningstar, Inc.

**Vanguard 500 Index fund

EQUITY FUND CATEGORIES

Leaders	Four-week total return	%	Laggards	Four-week total return	%
Japan	4.4		Precious Metals	-6.1	
Health	3.0		Latin America	-5.7	
Small-cap Growth	2.6		Pacific/Asia ex-Japan	-4.9	
Technology	2.1		Real Estate	-3.1	
Communications	2.0		Diversified Emerging Mkts.	-2.1	
Leaders	52-week total return	%	Laggards	52-week total return	%
Technology	67.6		Latin America	-17.0	
Pacific/Asia ex-Japan	63.1		Precious Metals	-8.8	
Japan	53.2		Real Estate	-6.1	
Diversified Pacific/Asia	48.5		Europe	-6.0	
Communications	42.8		Small-cap Value	-1.3	

INTEREST RATES

KEY RATES	July 28	Week ago	Year ago
MONEY MARKET FUNDS	4.61 %	4.58 %	5.10 %
90-DAY TREASURY BILLS	4.69	4.59	5.07
1-YEAR TREASURY BILLS	5.02	4.92	5.37
10-YEAR TREASURY NOTES	5.79	5.66	5.52
30-YEAR TREASURY BONDS	6.01	5.91	5.77
30-YEAR FIXED MORTGAGE†	7.78	7.62	7.03

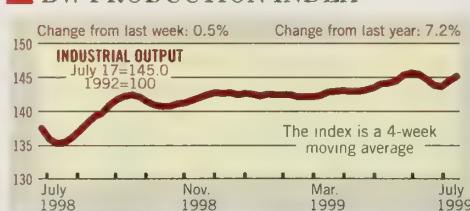
BLOOMBERG MUNI YIELD EQUIV

Taxable equivalent yields on AAA-rated, tax-exempt municipal bonds, assuming a 31% federal tax rate.

	10-yr. bond
GENERAL OBLIGATIONS	4.69 %
TAXABLE EQUIVALENT	6.80
INSURED REVENUE BONDS	4.83
TAXABLE EQUIVALENT	7.00

†BancQuote, Inc.

BW PRODUCTION INDEX



Information on each of the index components is at www.businessweek.com. BW production index Copyright 1999 by The McGraw-Hill Companies

The production index was up 1% ended July 17. However, the index fell 1%, to 145.4, from 146.5 in June. The index rose 1.6%, with an 18% increase in seasonal adjustment, rail-freight traffic. Truck production soared sales gains of 5.6% each in both up and sport-utility segments second quarter. Production of color televisions also posted gains, while steel, electricity, and oil were down.

THE WEEK AHEAD

CONSTRUCTION SPENDING Monday, Aug. 2, 10 a.m. EDT ▶ Building outlays likely rose 0.5% in June, after falling 0.9% in May, says the median forecast of economists polled by Standard & Poor's MMS, a unit of The McGraw-Hill Companies.

NAPM SURVEY Monday, Aug. 2, 10 a.m. EDT ▶ The National Association of Purchasing Management's index likely slipped to 56% in July, from 57% in June.

LEADING INDEX Tuesday, Aug. 3, 10 a.m. EDT ▶ The Conference Board's leading-indicators index likely rose 0.2% in June, after May's 0.3% gain.

FACTORY INVENTORIES Wednesday, Aug. 4, 10 a.m. EDT ▶ Factory inventories likely grew 0.3% in June, on top of a 0.2% rise in May.

PRODUCTIVITY & COSTS Thursday, Aug. 5, 8:30 a.m. EDT ▶ The S&P MMS forecast expects that output per hour worked in the nonfarm business sector rose at a 2.6% annual rate in the second quarter, following a stunning 3.5% gain in the first quarter. Unit labor costs likely grew at a 0.5% annual rate last quarter, near their 0.7% advance in the first quarter.

EMPLOYMENT Friday, Aug. 6, 8:30 a.m. EDT ▶ Nonfarm payrolls probably increased by

195,000 jobs in July after rising 268,000 in June, according to the S&P MMS median forecast. The jobless rate likely remained at 4.3%.

INSTALLMENT CREDIT Friday, Aug. 6, 4 p.m. EDT ▶ Consumers probably took \$6.2 billion in new debt in June after borrowing a surprisingly large \$12.1 billion in May.

BusinessWeek ONLINE

For more investment data and the components of the production index, visit www.businessweek.com.

PREVENTING FURTHER ASIAN FLU

Two years after the Asian meltdown began, the speed and strength of the recovery has surprised and delighted not just Asians but the world. A stronger Asia is good news for construction workers scrambling for jobs in Seoul just as it is for U.S. exporters of everything from jet planes to wheat. But the fast snapback brings its own dangers.

Much more must be done if Asia wants to protect itself from future crises. Financial institutions in most Asian countries remain a wreck. Although South Korea has spent most of the \$53 billion it budgeted for restructuring the banks, the troubles of the debt-ridden Daewoo Group point to the depth of the financial sector's problems. Seoul agreed in principle many months ago to sell to foreigners two insolvent banks it had taken over. But the government won't finalize the deals, in part because of pressure from *chaebol* like Daewoo that are worried about having their access to credit reduced.

The situation is equally grim in the other crisis countries: Thailand, Malaysia, Indonesia. In a blunt warning, Thai central bank chief Chatu Mongol Sonakul recently told bankers to stop lending money to their pals and start focusing on profitability. Otherwise, Chatu Mongol warns, they'll perish in the face of foreign competition.

As foreign investors return, Asian countries need to carefully consider how much money they want to come in and under what terms. Portfolio investment is by nature fickle—and if the money starts to pour out again, another bailout by the industrial countries is unlikely. While there's no perfect solution, it's crucial to lessen the reliance on short-term investors.

Asia has room to maneuver. The impressive current-account surpluses piled up since the crisis began reflect the region's export prowess. Moreover, Asia went into the crisis with low public debt, which means that its taxpayers can help foot the bill for shuttering bad banks. But that's not enough. In the end, if Asia doesn't learn from its mistakes, hard-hearted investors will see to it that Asia repeats them.

BIG BOARD: LOOK BEFORE YOU LIST

The unprecedented depth and flexibility of the U.S. financial markets lie at the heart of the New Economy. Money is directed to the fastest-growing sector of the economy, enabling innovative new companies to raise financing far more easily than businesses anywhere else in the world. Meanwhile, the U.S. markets are able to attract large funds from overseas, enabling the country to maintain its rapid pace of investment despite a low savings rate.

Now the two major U.S. stock equity markets—the New York Stock Exchange and NASDAQ—are considering turning

themselves from self-regulating private bodies to traded corporations. Richard A. Grasso, chairman of the venerable NYSE, has suggested that a stock offering might be as soon as Thanksgiving. NASDAQ is not far behind. In some cases, the exchanges are being driven by the intense competition from electronic-trading networks.

In principle, nothing is wrong with this plan. But Wall Street's critical role in the economy, it's worth noting, is more time to get it right. For one, the exchanges must come up with a way of addressing some key regulatory issues. Right now, they supervise the behavior of their members, but that may no longer work when the exchanges become for-profit companies. Instead, it may be necessary to set up an independent regulatory body able to monitor and discipline the exchanges.

The current system of exchanges has proven successful in balancing the oft-conflicting interests of investors, corporations, and Wall Street brokers. Going public would bring in another set of interests—the shareholders—with uncertain results. History shows, as in the case of the Asian economies, that there are many ways that financial markets can go wrong. The exchanges should not rush to market until they and regulators have thoroughly considered the consequences. If it ain't broke, think twice before fixing it.

THE MAYTAG MAN WHO NEVER RESTS

It's a true American success story: from growing up in a one-room, 20-foot house without running water in rural Michigan to a position as acclaimed leader, marketer, and soon-to-be executive of Maytag Corp. Certainly, Lloyd Ward stands out as one of the few African Americans to reach the top of a large U.S. company. But more important, his drive, competitiveness, and reliance on family are powerful lessons in how to succeed without losing your values.

Ward did start with some advantages—in part thanks to his mother and father who passed on to their son a love of books and education. But at every step along the way, Ward took advantage of opportunities as they came. In college, on an athletic scholarship, he made sure to take a tough course load, despite pressure from coaches. At his first job, at Procter & Gamble Co., Ward was able to step around the company's and patronizing attitudes to show his talents and skills. Moreover, at both P&G and PepsiCo, he set high goals for himself and the businesses he helped run. It was at PepsiCo, many years out of college, that he first expressed his ambition to be the CEO of a major U.S. corporation. And that goal, Ward was willing to take the risk of joining Maytag, a sleepy appliance company. In the end, he succeeded by being an exceptional leader—listening, coaching, motivating, and competing hard with new, premium products in a marketplace defined by commodity look-alikes.

Not everyone can strive to be chief executive of a company, nor should everyone. But the example set by Ward is inspirational to everyone—black, white, rich,

BusinessWeek

SEP 16, 1999

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UNDER FIRE

**GUN-CONTROL LEGISLATION. LITIGATION.
AN ANGRY PUBLIC. GUNMAKERS FEEL THE HEAT.
A CLOSE-UP LOOK AT THE SECRETIVE INDUSTRY.**



BURLINGAME

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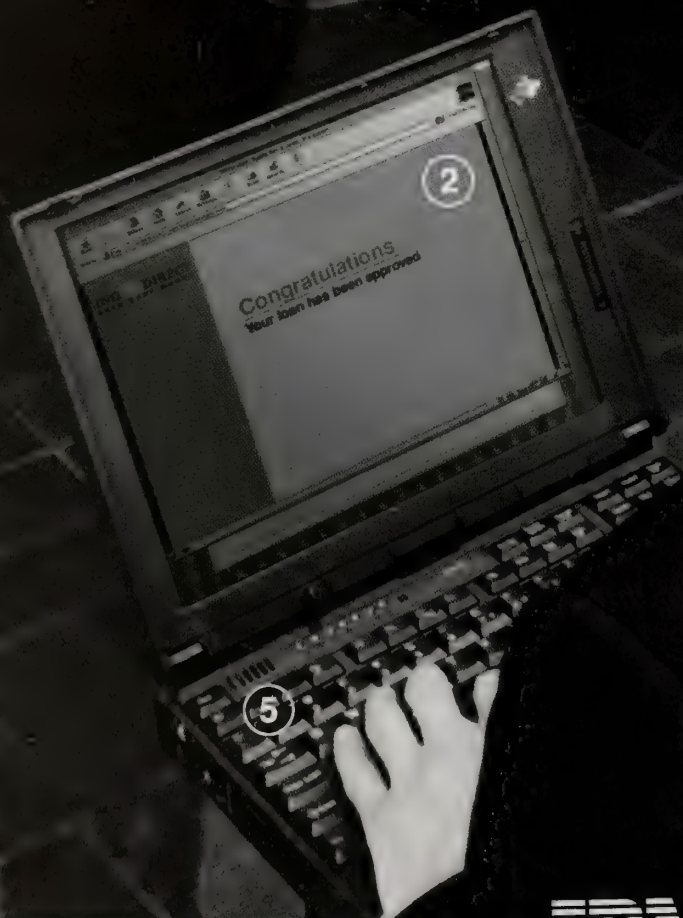
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Partner: Sanchez

Tools: RS/6000, MQSeries,
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Solution: Virtual Banking

While many industries are offering products on the Internet, service industries like banking and finance are also taking advantage of e-business. Services that once took banks weeks to process are now done instantly online. And banks are drastically cutting costs as a result.

Sanchez Computer Associates and IBM have created software solutions that directly address the relationship between e-business and financial services. Sanchez has been providing integrated production software to financial institutions for 20 years.

ING FSI Commercial Banking saw the marketplace shifting to e-business. It quickly embraced the technology and opened the first-ever "virtual" bank in Canada, ING Direct. Having no physical branches, agents or brokers, ING Direct was able to translate its low overhead into highly competitive products and services.

1 ING Direct attracted over 150,000 new customers in Canada during a 24-month period.

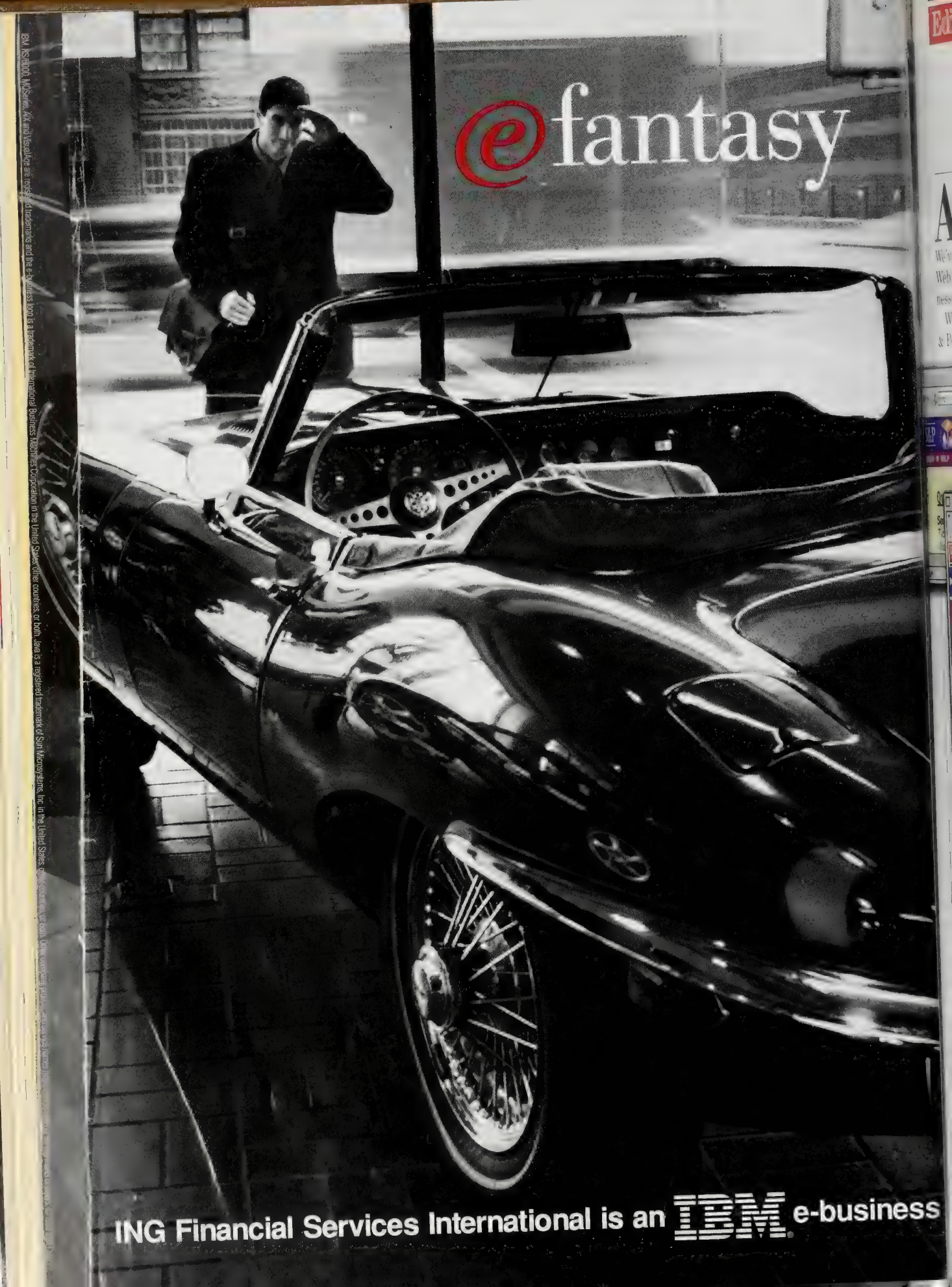
2 Because of low overhead, ING Direct can offer a savings account in Canada with high interest rates.

3 ING Direct develops and sends customized financial products based on customer profiles.

4 ING Direct's banking presence was established from scratch in six months instead of more than a year for brick-and-mortar.

5 ING Direct's Toronto branch garnered over \$1 billion in new deposits in two years.

"We've had so much success with the direct model that we are rolling out the system worldwide," says Martin Vonk, CIO at ING FSI. "e-business couldn't be a more natural fit for us." Find out how e-business can improve your business at www.ibm.com/e-business/sanchez or call 1 800 IBM 7080, ext. BP04.



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As chroniclers of the Information Age, we write a lot about the need for businesses to innovate at Net speed. We've been taking our own advice with our Web site, Business Week Online (www.businessweek.com).

We are joining forces with the Standard & Poor's Personal Wealth Web site ([sonalwealth.com\) to bring the deep data and analytical expertise of our corporate sibling to our online readers. \(Both BUSINESS WEEK and Standard & Poor's are divisions of The McGraw-Hill Companies.\) This in a year that has already seen the addition of daily coverage of electronic business with Business Week e.biz and the launch of our new small-business site for entrepreneurs, Frontier Online.](http://www.per-</p></div><div data-bbox=)

If you're a regular visitor to Business Week Online, either on the Web or on America Online (Keyword: BW), I'm certain you'll

find Personal Wealth a welcome addition to our family of services that appear only online. Those also include our Daily Briefing; our guide to the best B-schools; our popular technology buyer's guide, Maven; our Global Business channel; and a Career Center, where you can find new employees—or a new job. Oh, yes—you

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can also read every story we print around the world, online, every Thursday evening.

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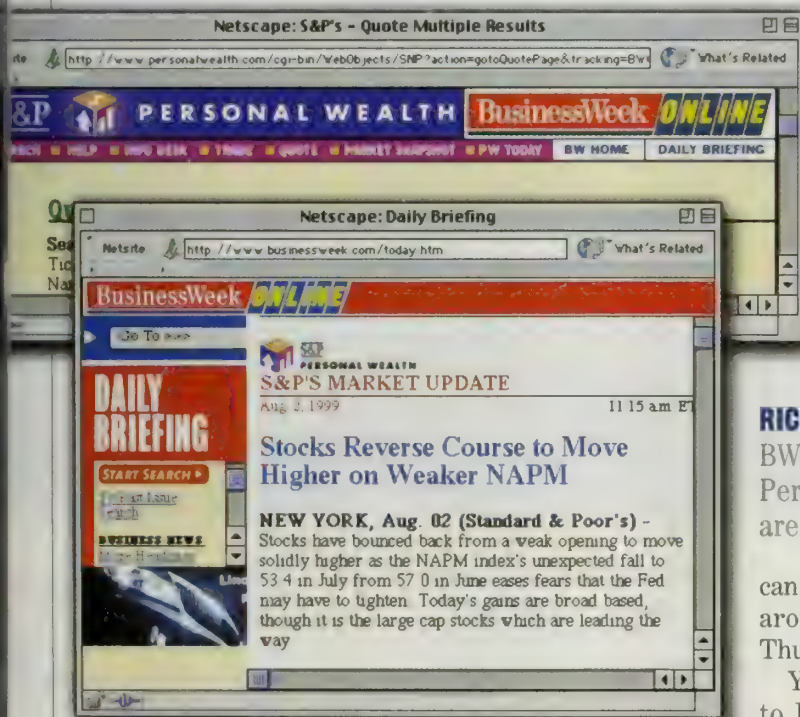
BUSINESS WEEK back issues—if you are a subscriber to the magazine. All you need is the account number that's printed on your mailing label.

If you haven't visited us on the Web yet, I hope we've just made it that much harder to stay away. But we're not through yet. In the weeks ahead, I'll have more to tell you about enhanced features and content offerings as we continue to build BUSINESS WEEK's home on the Web. Watch this space.

Editor-in-Chief

sonalwealth.com) to bring the deep data and analytical expertise of our corporate sibling to our online readers. (Both BUSINESS WEEK and Standard & Poor's are divisions of The McGraw-Hill Companies.) This in a year that has already seen the addition of daily coverage of electronic business with Business Week e.biz and the launch of our new small-business site for entrepreneurs, Frontier Online.

Bringing Personal Wealth under BUSINESS WEEK's online umbrella allows us to offer a compelling mix of services for the online investor, combining the strengths of BUSINESS WEEK with Personal Wealth features such as financial-planning tools, fund rankings, and objective personalized investment recommendations—a unique feature on the Web. Personal Wealth puts the unbiased market



It's high noon for
gunmakers as
demands escalate
for stiffer controls
and a legal
reckoning page 62



Kelleher needs a successor

page 70



AUGUST 16, 1999

49 WASHINGTON OUTLOOK

Is Clinton torpedoing a New compromise on the surplus?

AHA!
Paul Allen's cable
strategy is starting
to make sense page 81



GENERATION \$
Young, hot talent is
riding high page 34

CYBER PLUNGE
The great Net stock
sell-off page 32



END ZONE
The struggle for the
49ers looks almost
over page 61



PARTY HEARTY
Consumers and
companies are still
spending page 88



LATE START
Now Oracle's Larry
Ellison means
E-business page 74



T SHOP?
ed currency
It may be a
me page 78

ts Business

INS THE 49ers?
dust settles on a family feud, it
s if Eddie DeBartolo will lose the
um to sister Denise

agement

ENTARY: SOUTHWEST
will follow Herb Kelleher, the
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s, needs a fast turnaround

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s more punch in Apple's portables
E PLUGS IN
ally practicing the E-engineering
it has been preaching

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S CURRENCY TRADER FOR REAL?
v York firm may have bilked
ors out of millions

- 80 CITIGROUP: SO MUCH FOR 50-50**
The Weill-Reed co-CEO concept is over
- 81 COMMENTARY: DAY TRADING**
More often than not, it's a sucker's game

People

- 84 PAUL ALLEN GETS A LITTLE RESPECT**
Dilettante no longer, he has become a
serious cable player

Corporate Scoreboard

- 88 KEEPING THE PARTY GOING**
Spending by households and businesses
ensures there's no slowdown in sight
- 90 U.S. PROFITS: ASIA ISN'T CHIPPING IN**
And it'll be a while before it does

BusinessWeek Lifestyle

- 115 KIDS AND BACK PAIN**
Heavy book bags and ill-fitting pc
setups are stressing young bodies
- 117 KEEPING KIDS SAFE ONLINE**
A new Web site shows parents how

BusinessWeek Investor

- 118 ...AND PRIVATE EQUITIES FOR ALL**
The lucrative funds of funds are not
just for the superrich anymore
- 122 THE BARKER PORTFOLIO**
High fund fees have got to go
- 124 GENE MARCIAL: INSIDE WALL STREET**

Features

- 1 EDITOR'S MEMO**
- 4 UP FRONT**
- 8 READERS REPORT**
- 9 CORRECTIONS & CLARIFICATIONS**
- 13 BOOKS**
Pendergrast: *Uncommon Grounds: The History of Coffee and How It Transformed Our World*
- 77 DEVELOPMENTS TO WATCH**
Titan's ocean, levitating magnets, healing Kosovars, cleaner ethylene
- 126 FIGURES OF THE WEEK**
- 127 INDEX TO COMPANIES**
- 128 EDITORIALS**

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Up Front

EDITED BY ROBERT McNATT

SLUGFESTS

IS eONE CRUISING FOR AN iBRUISING?

SINCE NOVEMBER, EMACHINES has rocketed to No. 3 in U.S. home personal-computer sales by launching the booming sub-\$600 market.

Now, the competition is beginning to counterattack.

Compaq Computer has already filed a patent-infringement suit. Apple Computer may be the next rival to scream foul, especially after the company sees emachines' new eOne PC, to be unveiled on Aug. 9.

The eOne runs Windows rather than Apple's Macintosh software. But its translucent-blue look and curvy PC-plus-monitor are clearly

designed to capitalize on the success of Apple's iMac. The eOne could sap Apple's recent success at winning converts from Windows-based PCs. For one, it costs \$799, compared with \$1,199 for the iMac. And unlike iMac, eOne has a floppy drive.

If Apple sues, as it recently did when Future Power and Dae-woo unveiled an iMac knock-off, emachines might be



FAMILIAR LOOK: eOne

forced to delay filing for its initial public offering in August. Indeed, hefty lawyer bills might be enough to sap emachines' meager profits. U.S. Bancorp Piper Jaffray analyst Ashok Kumar says that "emachines' business model doesn't have any slack built into it." *Peter Burrows*



TAXING MATTERS

GIVING BIAS VICTIMS THEIR FAIR SHARE

WHEN WORKERS WIN BIAS suits against their employers, you'd think they'd be rolling in dough. But both lawyers' fees and damages for emotional stress are taxable. So not only can big settlements shrink, winners might even end up owing money. But that situation may soon change.

Consider one recent case: More than 85% of Shannon Doyle's pending \$1 million award against a unit of West-

inghouse will be eaten up by lawyers' fees and taxes. Westinghouse reneged on a promise to hire him after he'd pointed out safety violations at a client nuclear plant. And when lawyer fees outpace awards, the winners may end up in the red.

To prevent such anomalies, a Washington odd couple—the U.S. Chamber of Commerce and the Leadership Conference on Civil Rights—is backing the Civil Rights Tax Fairness Act of 1999. The bill, which has bipartisan congressional support, would end taxes on attorney fees, allow income averaging for pay awards, and restore the tax exemption for damages for emotional distress. Employers like the bill. Since they often have to cover part of the tax bite, reducing it makes settlements cheaper. *Stan Crock*

TALK SHOW "There has been enormous pain, enormous anger, but I have been with him half my life and he is a very good man"

—Hillary Rodham Clinton to *Talk* magazine

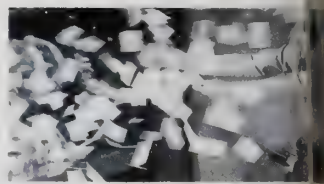
STARTUPS

YOUR GLITCH IS THEIR HEADACHE

WHEN THE PCS FREEZE, THE printers quit, and business owners have to hire a mob of highly paid, under-dressed techies to fix it all, the Net hardly seems the coolest thing around. Not to fear, says computer-industry veteran Sheldon Laube. On Aug. 9, he'll unveil CenterBeam, a company that vows to end technology headaches for small businesses.

For a monthly fee of about \$165 per user, CenterBeam will provide hardware and do everything from install programs to check for hackers—all via the Internet. Says Laube, formerly in-house tech guru for PricewaterhouseCoopers: "My goal is that in

five years, people will say, 'Remember when we didn't care about what a network was?' There is no reason it shouldn't be the fundamental way people buy technology. Thanks to falling prices and new wireless tech-



gies, Laube, who has raised \$20 million, thinks he can profitably run a core computer infrastructure.

A possible snag: Laube wants to provide equipment through local retailers, who may not want to part with their customers. And he is basing his company entirely on Microsoft's much-delayed Windows 2000 due out later this year. *Peter Burrows*

THE JOB MARKET

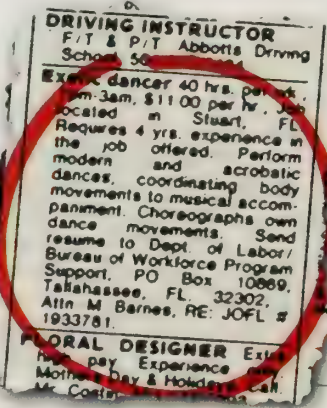
A STRIP SEARCH WITH A TWIST

WITH MANY ADULT CLUBS AND bars in the area, it's not unusual for the *Palm Beach Post* to run classified ads for exotic dancers. But this spring, it was the state of Florida running the ads. That's right. The Sunshine State was looking for a stripper. And now it's asking for help from the feds.

Although the advertisements have stopped, the opening is still listed in the Florida Labor Dept.'s data

bank. In seeking an exotic dancer who can "perform modern and acrobatic dance, coordinating body movements to musical accompaniment," the state says it's doing it would for any business. When a company can't find a qualified U.S. citizen for the job, the state can help. By law, Florida doesn't have to name the club, though it is located in Stuart. The dancer needs four years' experience. Pay is \$11 an hour.

Since there have been no takers, the business is hiring foreign talent, which is where the federal government comes in. The state has asked the Labor Dept. for permission to look overseas. They say they may decide this month. If approved, a stripper would get the work visa awarded to 60 temporary foreign workers every year. *Dennis B.*



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AFTERLIVES

FROM TECH WHIZ TO E-BOOK EVANGELIST

WHEN JAMES SACHS WAS A teenage tech savant growing up in Hanover, N.H., he sharpened his skills by writing computer programs for Dartmouth College officials. "For \$5 an hour, I would do anything," says Sachs. "I just wanted to be working on the computer."



SACHS:

Smaller is better

Sachs is 44 now, and computers still fascinate him. The man who helped develop the Apple Macintosh computer mouse and toys such as laser tag and Teddy Ruxpin has

left the toy business to create SoftBook Reader. It's a three-pound portable device that can download books, magazines, newspapers, and Web documents. Magazines *Time* and *Fortune*, among others, have agreed to provide Ecoppy. With his track record, Sachs easily found investors to put \$2 million into his company, SoftBook Press.

Sachs concedes that the \$599 gizmo costs too much and weighs too much. And so far, neither SoftBook nor its primary rival, NuVoMedia, whose Rocket eBook goes for \$349, will divulge sales. Analysts figure the sales will remain low until prices drop. But Sachs is optimistic that eventually, consumers will trade their paperbacks for E-books: "I'm sure there will be a yellow waterproof version someday for taking to the beach." *Janet Rae-Dupree*

I-WAY PATROL

ONLINE BIDDERS, BEWARE

WHEN IT COMES TO ONLINE auctions, the convenience of bidding at home may not outweigh the dangers of fraud. According to figures from Internet Fraud Watch, sponsored by the National Consumers League, 87% of fraud complaints it re-

FRAUD WATCH:

More than 5,000 complaints

ceived during the first five months of this year were related to online auctions. This year, it has received more than 5,000 complaints, surpassing 1998's total for online auctions. Cyveillance, an online monitoring outfit, estimates 10% to 20% of all online



items may be bogus. Cyberspace auctioneers are responding. Amazon.com's Alliance Program, created this spring, finds and removes counterfeit products from its Web site. Participating companies, such as Rolex Watch and Microsoft, teach the Web sites how to spot bogus items. eBay has a similar program.

Bricks-and-mortar auction houses are a better bet. Most offer guarantees of authenticity and have less than 1% of their items declared inauthentic and returned. "Experts around the world see our catalog," says a Sotheby's spokesman. "Selling in a public forum is the best way to promote authenticity." Online merchants hope to change the odds soon. *Stacey Higginbotham*

DRAWN & QUARTERED



Y2K CHAOS

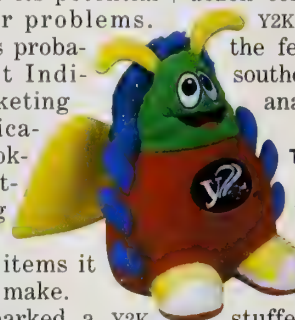
PLAYING THE NAME GAME—AND LOSING

YOU PROBABLY THINK "Y2K" is a generic reference to the millennium or its potential for computer problems. Legally, that's probably true. But Indianapolis marketing and communications firm Looking Glass Partners is claiming the Y2K label for a slew of items it does not even make.

LGP trademarked a Y2K Bug stuffed toy and now aims to slap the Y2K label on 550 wildly different products. The idea is that even if it doesn't make Y2K mopeds or Y2K egg substitutes, it can reap licensing fees from those who do.

So far, the strategy has

been a dud. "It's no mate. They have to bona fide intent to these products," says more intellectual-property attorney Jim Astrachan, though LGP has confirmed dozen companies using the Y2K label on products. The federal court in the southern district of Indiana ruled against



TRADEMARK

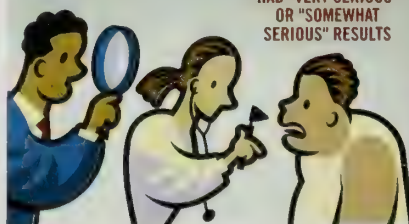
LGP's Y2K

when it sued Senna Pr Senna ma stuffed toys, to Crash, Stash, and B Y2K bears. The judge said public does not associate term Y2K with LGP, Senna's bears do not in the trademark. Now, that movie, 2001: A Odyssey... *Roy Fu*

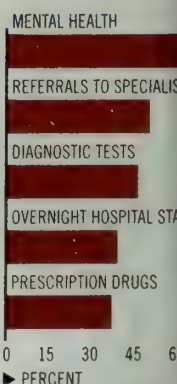
THE BIG PICTURE

PRESCRIPTION FOR DANGER

Doctors worry that managed care hurts patients: 87% have seen a patient's treatment plan overruled, while 61% regularly see prescriptions denied.



DENIALS THAT HAVE HAD "VERY SERIOUS" OR "SOMEWHAT SERIOUS" RESULTS



DATA: KAISER FAMILY FOUNDATION, HARVARD SCHOOL OF PUBLIC HEALTH

FOOTNOTES Companies that have an Internet-usage policy: **53%**; that use filtering software to block some Web sites: **25%**



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BLOCKBUSTER: VIACOM'S REDSTONE BEGS TO DIFFER

I am deeply troubled—indeed outraged—by “Why it’s not a blockbuster IPO,” (News: Analysis & Commentary, Aug. 2). Your article is replete with errors of fact and errors of judgment.

Among the factual errors was an egregious misrepresentation of Blockbuster’s valuation—a miscalculation without which one of the article’s key negative points would have crumbled. This is particularly galling since Blockbuster Inc.’s public-relations staff specifically asked if we could assist in fact-checking. The proper valuation of the Blockbuster IPO, based on the proposed pricing range, is approximately \$4.4 billion to \$4.8 billion, not \$2.8 billion to \$3.2 billion. You simply forgot the obvious—namely, to add in the debt attached to Blockbuster. Compounding that error was your statement comparing the purported \$8.4 billion acquisition cost of Blockbuster in 1994 to the value derived from the estimated price at which less than 20% of the shares of Blockbuster will be sold in the IPO. For one thing, when Blockbuster was acquired, it owned \$1.85 billion in Viacom Inc. equity securities, which were extinguished by the acquisition. For another, the purchase included numerous assets, not the least of which was Spelling Entertainment Group Inc., that are not being sold to the public.

Your readers get only a one-sided view of the video industry. You chose not to include our responses to the technological issues you raise. Also, out of the four major research firms that track video-rental data, only the one you cite is projecting a contracting, and not a growing, market. And two of the analysts cited in the piece have largely positive opinions on Blockbuster, though only negative comments were used.

You dismiss our enormous achievement in getting Blockbuster on track (and reinventing an entire industry) and substantially growing our market share with the absurd suggestion that these were “easy fixes.” Maybe it would have

been easy for the experts at *Business Week*, but it was damn tough to turn Blockbuster around. You deserve better treatment. So do we.
 Sumner M. Redstone

Viacom Inc.
 Editor’s note: A correction of Blockbuster’s valuation appeared in the August 2 edition. We apologize for the error. The correct numbers, *BUSINESS WEEK* analyzes the IPO as follows: Allow for the Viacom securities owned by Blockbuster and other adjustments, the 1994 acquisition price to about \$4.4 billion—still more than the \$4.4 billion \$4.8 billion value of Blockbuster’s proposed IPO.

RETIREES ARE A BIG OPPORTUNITY FOR CORPORATE AMERICA

The small chart in “Workforce Drop” (Up Front, July 26) does not provide the big picture. Over the recent retirees in your sample, to continue working part-time or full-time after retirement, and or are worried about outliving their financial resources. We have a rich pool of more than 41 million Americans in the 55 to 75 age range, over whom are retired—and many of whom are interested in continued employment.
 These are people with proven skills and abilities who provide a flexible and effective resource that can sustain productivity gains and economic growth. What drives many of them is the desire to remain productively engaged. Will Corporate America wake up and use this excellent resource?

William K. Boulden

AN EARLY OBSERVER RECALLS BEN ROSEN'S EDGE

Regarding “The lion in winter” (Story, July 26) on Benjamin M. Rosen, I’m betting on Ben. Our paths crossed in the early ’70s when I was CFO of Instruments Inc. and Ben was

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ACTIONS & CLARIFICATIONS

advance in digital photos" (Tech-You, July 26) erred in saying that Photoshop software is provided with film MX-2700 digital camera. The includes the less powerful Adobe Luxe software.

marred a photo of Benjamin M. chairman of Compaq Computer Corp., lion in winter" (Information Tech-uly 26). What appeared to be a met- the picture was a mark made in- itly during processing. The defect ave been cropped out of the photo.

Ave: A star is reborn" (Marketing, three names were misspelled. They ave read Kevin Wassong, Alan Platt, d Jaques.

Stanley analyst covering TI. always impressed that Ben, in eas, knew more about our fu- ortunities and competitive sta- we did. Of course, this resulted igent discussion with our cus- suppliers, and competitors in sed way not available to TI. So xvinced he has a solid plan for ure of Compaq Computer Corp.

Edward O. Vetter
Dallas

NET BANKS ARE SKIMPING CUSTOMER SERVICE

oyed "Net banking is here, but it rived?" (Business Week In- uly 26). You sum it up when clude that Net'banking is go- e great but "not yet." Stanford Credit Union was the first fi- institution anywhere to do fi- transactions on the Net (1994) also the first with a Web site b-based home banking. U.S. nions have been leaders in E- ce, strange as it may seem.

le novo Net banks, such as the u sampled, have skipped the d-mortar phase of their full-ser- terparts, creating new systems atch to get online as quickly as t. What many of them have trou- is what most existing credit and banks do so well—provid- d customer service up front, ount sign-up to order-fulfillment. ve bill payment a fair trial, I end using it through a credit r bank. Quicken and Microsoft also offer bill payment through nions and banks, as well as di- through CheckFree Holdings y choice for the most customer-

friendly service). I have been using bill- payment service for the past several years, and it has become a "no brainer" for me. This is the wave of the future.

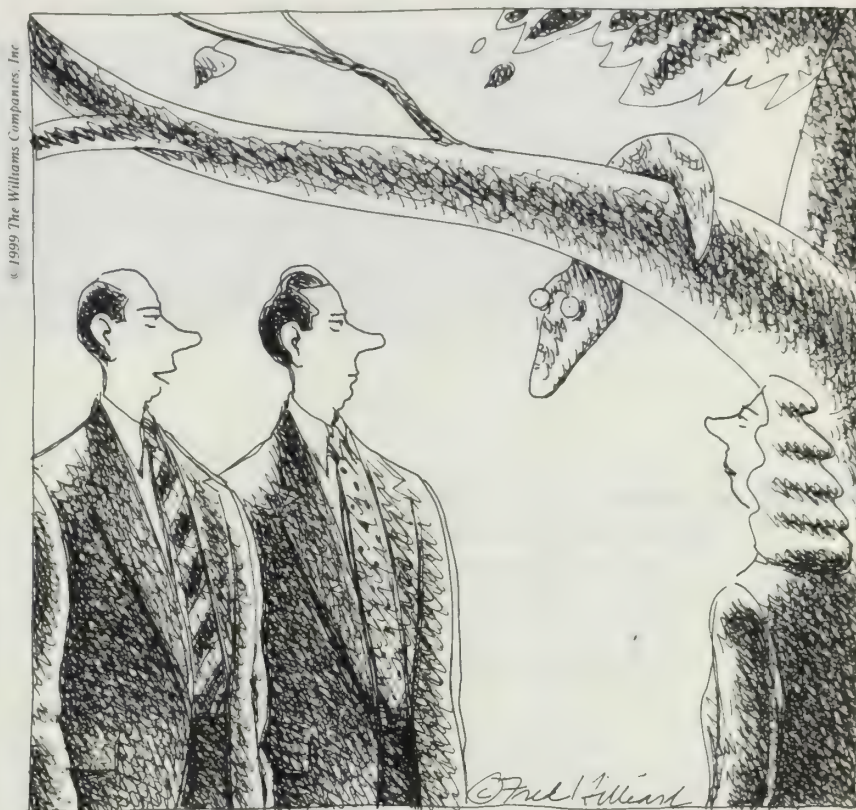
Warren Marshall, President
Stanford Federal Credit Union
Palo Alto, Calif.

THE NEW ECONOMY'S 'TORNADOES'

BUSINESS WEEK has been out in front on New Economy thinking ("The New

Economy finally gets some respect," Editorials, July 26), but you don't go nearly far enough. What we are witnessing today is the birth of a new economic system based on nearly telepathic Internet communication. So long, Industrial Age; hello, Telepathic Age.

The Telepathic Age adds a new factor of production—knowledge work—and a new form of monetary compensation—gain-sharing—to Adam Smith's familiar Industrial Age factors of pro-



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Readers Report

of land, labor, and capital, with usually familiar monetary components of rent, wages, and profit. Telepathic knowledge workers with the information required to make decisions, can make decisions consulting a hierarchy, and are satisfied with gain-sharing elements such as stock options. Greenspan, America's personal-rate hasn't ducked below zero; obsolete Industrial Age economics simply fail to count gain-income as personal income.) Good news is that adding a new of production inevitably results in a tremendous increase in the standard of living. The bad news is that the economy must be destroyed. The abrupt transition to the Tele-Age will spawn creative-destructive tornadoes of unprecedented ferocity. These tornadoes will decimate middleman-laden Industrial Age production-and-distribution systems and the tens of millions of jobs with it.

John Frisch
Wichita

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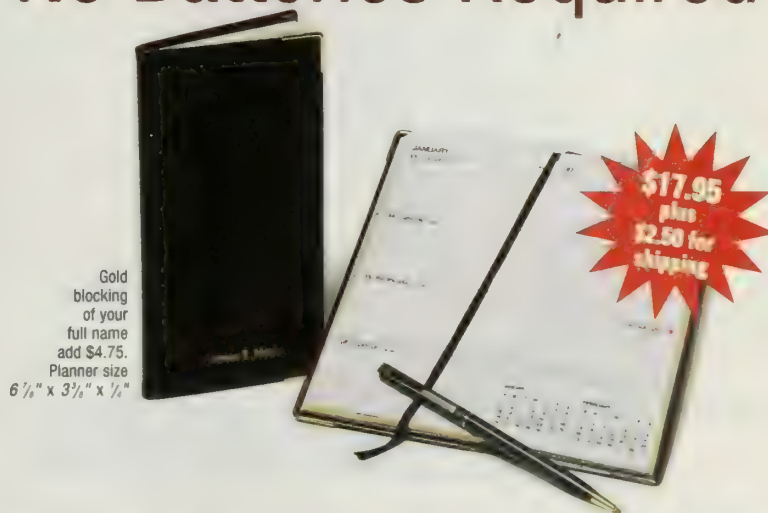
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BY STEPHEN H. WILDSTROM

MORE PUNCH IN APPLE PORTABLES

With the iBook and PowerBook G3, Apple reclaims its lead in notebook technology

Apple Computer more or less invented the modern notebook with its first PowerBook in 1991. Then, as has so often been the case in the company's tortured history, it sat back and watched IBM, Toshiba, and others make a huge commercial success of its innovation. With the debut of the iBook, the first portable designed from the ground up as a consumer product, Apple is making a bid to reclaim technological and design leadership.

Unfortunately, especially since the iBook seems ideal for the educational market, it's going to be at least late September before anyone can buy one. Worse, advance orders will keep supplies tight until well into the fall. But the iBook isn't the only portable in Apple's arsenal. The new PowerBook G3 is not as eye-catching as the iBook, but it's a winner for Apple's core market of graphics-arts and multimedia professionals.

POWERBOOK G3

The new PowerBook is the sort of big, do-it-all notebook that is fading away in the Windows world. But there, the market for high-end laptops is dominated by execs who don't do much heavy-duty computing and who are willing to trade power for portability. Top-of-the-line PowerBooks are

bought for such demanding tasks as video-editing and animation, which need all the power they can get.

Superficially, the PowerBook looks like a minor revision of the notebooks introduced a year ago. It has the same striking design, with a big white Apple logo on top. But a closer inspection reveals dramatic engineering changes that the rest of the industry ought to study.

The most important is battery life. The PowerBook G3 is a true desktop substitute, with a big, bright 14.1-inch display and PowerPC G3 processors running at up to

the sort of task the 400-MHz model I used is ideally suited for, but one that really sucks power. This improved battery life is due mainly to the IBM-designed processor, the first to use power-thrifty copper technology. As a bonus, the PowerBook also runs cooler than Pentium II notebooks.

The other major breakthrough is in weight. The new PowerBook G3 is about a third of an inch thinner than its predecessor and weighs about 1½ pounds less. Even in a loaded configuration, it weighs 6.4 pounds—half a pound less than an IBM ThinkPad 770.

While the PowerBook G3 aims at an audience of Apple loyalists, the \$1,599 iBook is an attempt to duplicate the iMac's success in creating a new market for Apple. I won't

ly low price, and you have a computer ideally suited for students from elementary school through college.

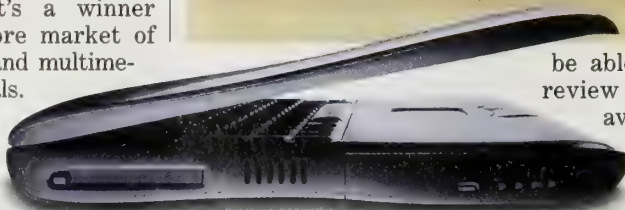
The other major innovation the iBook offers is an networking setup called FirePort, designed by Link Technologies Inc. The nation of a \$99 add-on for the iBook and a \$99 station allows an iBook to connect to the Internet anywhere in or around the house. (3Com plans a similar product for Windows this fall.)

Unfortunately, Apple are going to have to get software good

THE NEW APPLES TO GO

	POWERBOOK G3	IBOOK
Processor	333-400 MHz	300 MHz
Memory (std/max)	64/384 MB	32/160 MB
Disk drive	4-10 GB	3.2 GB
Display	14.1 in.	12.1 in.
Dimensions (in.)	10.4 x 12.7 x 1.7 in.	11.6 x 13.5 x 2.1 in.
Weight	5.9-6.4 lb.	6.7 lb.
Price	\$2,499-3,499	\$1,599

DATA: APPLE COMPUTER INC.



be able to do a hands-on review until it becomes available this fall, but some distinguishing features are obvious from Apple's prototypes.

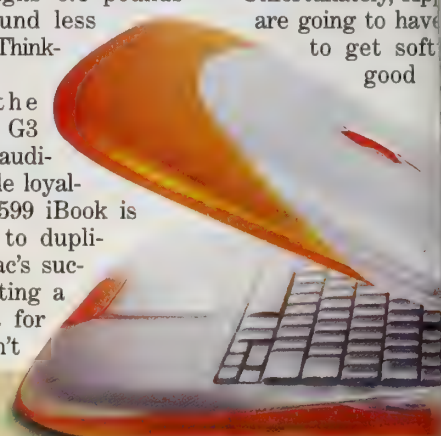
The 400 MHz, making it the fastest notebook on the market. Typical battery life in Windows machines in this class is under three hours. While Apple's claim of five hours is optimistic, I was able to get a good four hours per charge, even though I spent much of the time videoediting. That's

The colorful two-tone case is one. And though the iBook is big and a bit heavy considering its modest 12.1-inch display, that bulk buys ruggedness at the expense of portability. A standard Ethernet port makes attachment to networks a snap. Add the built-in handle and relative-

IBOOK

hardware. The Mac OS X operating system is showing and it has fallen behind Windows, especially Windows in the ability to run programs, crashproof security. This is especially a problem for high-end. The expected shipping for the solution, Mac OS X, has slipped from this fall to next year. Mac OS 9, an update of the current operating system, is scheduled for release in October.

Still, the important is that Apple has followed on its iMac success by becoming a significant player in portable computing. At a time when most of the industry is straining to make hardware as cheap as possible, it's a pleasure and relief to see some creativity in consumer computing.



ON GROUND

History of Coffee and How It Transformed Our World

by Mark Pendergrast

Books • 520pp • \$27.50

THE RISE AND FALL AND RISE OF COFFEE

...no product has done more tooment social unrest than coffee. Since the 16th century, when the governor of Mecca closed coffeehouses after learning that they were the source for satirical songs about him, the caffeinated bean has been up and down the status quo.

...over coffee that French intellectuals plotted much of their revolution in the late 1700s, and it was a coffeehouse called the Green that Daniel Webster termed the birthplace of the American Revolution. Coffee "has been the world's most popular drink in that its function has alienated to make people think," wrote Mark Pendergrast, an early historian of the drink. In Latin America, meanwhile, coffee dependence on the bean and the terrible conditions that accompany it have been the cause of war and civil unrest.

Uncommon Grounds: The History of Coffee and How It Transformed Our World author Mark Pendergrast tells the story of the drink that has become a part of modern society. Coffee is the world's second-most-valuable commodity, trailing only oil. It is the world's most widely consumed psychoactive drug, and more than 100 million people work in some part of the coffee industry.

Pendergrast traces coffee's history to its legendary discovery by an Ethiopian goatherd, said to have found it while cavorting wildly in the forest after having eaten the bean, to its 1990s-led boom. Along the way, he examines the advertising boundaries it has broken, the environmental damage wrought, and the international politics it has caused.

Fortunately for most readers, *Uncommon Grounds* will be as difficult to read as an overly bitter cup of coffee. The 520-page effort spends

far too much time on the numbing details of price gyrations and long-disappeared brands. Rather than constructing a compelling narrative, Pendergrast has written something that often feels like a textbook for a college survey course on the history of coffee. Consider this typical sentence describing the formation of a trade group: "Primarily through the efforts of California's Ted Lingle and New York's Donald Schoenholt, coffee idealists from both coasts met in San Francisco in October 1982, sitting cross-legged on the floor in the parlor of the little Hotel Louisa, and hammered out a national charter."

It's a shame, because Pendergrast has a wonderful tale to relate. At the end of the 18th century, despite the rich history of cafés, coffee still was not a product for the masses. The drink was not a part of the daily rationing for the American Continental Army, for example. That would change by the Civil War, when each Union soldier was given the equivalent of 36 pounds per year—three times our current consumption level. Indeed, by the end of the century, coffee was so popular that it had sparked a backlash. A health faddist named C.W. Post launched a coffee substitute called Postum, writing his own ad copy that decried caffeine as nefarious and unhealthy. Postum turned him into a millionaire, thanks in part to coffee brands that responded with ads blaming each other for illnesses.

But the bean's allure has been too strong for the periodic health scares, ranging from threats of nerve destruction to cancer, that have hampered it. By the start of the 20th century, coffee was the most popular beverage in the

U.S. By the 1920s, after Post's death, his own company—which today is one of the nation's biggest cereal sellers—recognized its appeal and bought Maxwell House.

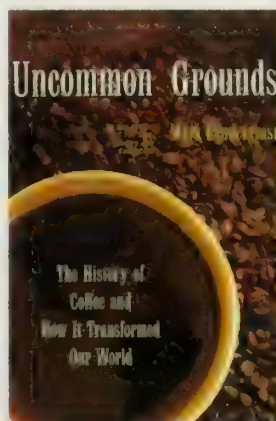
It was a high time for the drink. Prohibition boosted sales as consumers looked for an alcohol substitute, and many taverns became coffeehouses. National radio campaigns helped the strongest brands. Not even the Depression slowed coffee's rise: By the end of the '30s, 98% of U.S. families drank it in one form or another.

World War II aided coffee further, addicting millions of soldiers—who often warmed it with nothing other than matches. (Indeed, as the author notes, "the American soldier became so closely identified with his coffee that G.I. Joe gave his name to the brew, a 'cuppa Joe.'") The Marine Corps bragged about imbibing more of it than any other division of the armed forces, and the British dropped packets into coffee-deprived Nazi-occupied countries to make the locals long for Allied victory. By the end of the war, the average American was using almost 20 pounds of coffee beans per year.

But the seeds of its decline had already been planted. Coca-Cola and Pepsi had also become popular among soldiers, and those companies spent the '50s and '60s using hip advertising, their products' sweet flavor, and their cans' portability to knock coffee off its perch.

In the following decades, the major java brands continued cheapening their roasts and using aging TV stars in promotions. The campaigns—such as the lame "I go for coffee. You go for coffee. Let's go for coffee together"—utterly failed to inspire rebellious baby boomers, Pendergrast writes. Indeed, when a Wharton MBA named Mary Seggerman employed a young comedian named Jerry Seinfeld in a witty 1983 ad, her bossess at Maxwell House killed the spot.

The drink's true believers would revive its fortunes in the '90s. During the '70s and '80s, coffee stores and cafés had gained popularity, led by the path-breaking Peet's in Berkeley, Calif. Three



THE BEAN'S RICH HISTORY, FROM THE FIRST COFFEEHOUSES TO THE STARBUCKS CHAIN



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Books

friends from Seattle copied the layout and started their own Starbucks—in 1971. When a man named Howard Schultz noticed many drip-brewing thermoses the buying from him, he joined the company and in time became CEO. Although Pendergrast doesn't say so, it was a part of the story of Ray Kroc, who founded the first McDonald's Corp. franchise after selling the original store and their milkshake makers.

Today, although coffee consumption is still just about 60% of what it was in the 1940s, the drink's decline has halted. Its success has set the stage for the latest controversy: the business tactics of Starbucks that have driven many small cafés out of business.

Throughout *Uncommon Grounds*

Coffee is the world's second-most-valuable exported commodity, trailing only oil.

Pendergrast gives a taste of what the book could have been. At one point he uses the story of William Benton and Chester Bowles to describe the modern advertising. They began their agency in 1929, just months before the stock market crash. It grew to \$1 million in billings by 1935 on the strength of its client Maxwell House's sponsorship of one of the most popular radio programs of the day, "The Maxwell House Show Boat." The duo eventually sold out, growing to regret their role in the creation of an advertising-driven consumer society. One became the governor of Connecticut, the other a Senator.

These are the kind of characters which the author should have used more ink. And there are many others, such as the whaling Folger family of Nantucket, Mass., that included Benjamin Franklin's mother and made an appearance in *Moby Dick*. Alas, they often lose out to the intricacies of the International Coffee Agreement. It is why, to use a phrase from the dust jacket, you may need to "tip the pot of Joe (or two)" before diving into *Uncommon Grounds*.

BY DAVID LEON

Chicago correspondent Leon read most of this book at his coffeehouse.



BEFORE YOU GO TO HARVARD BUSINESS, YALE LAW OR STANFORD MED, CONSIDER PLYING TO A REALLY TOUGH SCHOOL.



Photo: Tony Stone Worldwide

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and in 1985 AOL realized that if you focus on consumers and make it really easy, the world will visit. 17 million people are running with AOL right now.

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BY ROBERT J. BARRO

IS ALAN GREENSPAN A GENIUS—OR JUST PLAIN LUCKY?



TIMELY:
Greenspan is no more than a competent economist who was fortunate enough to be in office when price stability could be achieved

As usual, investors are pondering Federal Reserve Chairman Alan Greenspan's recent congressional testimony to get hints about future changes in interest rates. This speculation intensified last week with the announcements that the growth of gross domestic product had slowed but that wage inflation had picked up. Greenspan's opaque style suggests that the Fed's setting of rates is a mystery beyond the comprehension of mortal observers. But in fact, much of the variation in the federal funds rate—the interbank interest rate that the Fed controls closely—can be explained as Fed responses to two factors: inflation and aggregate economic activity.

The movement of the federal funds rate to these kinds of economic variables is often referred to as a Taylor rule, in honor of John B. Taylor, the Stanford University economics professor who enunciated the idea six years ago. Researchers have made numerous studies of the rule, partly as descriptions of actual monetary policy and partly as analyses of desirable policy. Using a variant of the Taylor rule, I recently found that the funds rate during the Greenspan era so far—August, 1987, to July, 1999—can be explained by three factors: Rates respond positively to inflation (changes in the GDP deflator), positively to real GDP relative to its trend, and negatively to the unemployment rate.

The blue line in the chart shows the federal funds rate for the Greenspan period. The red line shows the values I estimated from my model. These values can be viewed as goals toward which the Fed tends to adjust interest rates over time. As the chart shows, the estimated values closely track the actual rates.

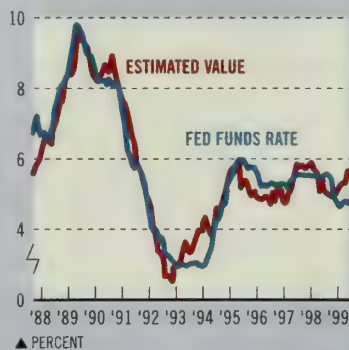
In June of this year, the funds rate of 4.75% was a full percentage point below my estimated value of the Fed's goal. The gap arose partly because of the rate cuts in late 1998 and partly because the strong economy raised the estimate from 5% at the end of 1998, to 5.8% in June, 1999. Probably in response to that gap, the Fed raised the federal funds rate to 5% in June. For July, I esti-

mate the Fed's goal to be 5.7%, so between that and the current funds rate comes to 0.7 percentage points. To eliminate this gap, the Fed would have to raise the funds rate by an additional half- or quarter point. The history of the Fed's monetary policy predicts that these increases will come, but the timing is difficult to predict.

Since the Fed's principal mission is to maintain low and stable inflation, it is not surprising that it would raise rates when inflation increases. However, the case for higher interest rates solely because the economy is strong is less clear. The GDP deflator is currently only about 1.5% per year. How should we expect higher inflation because economic growth has been strong and

employment low? If so, it would be good reason for the Fed to keep the game by raising interest rates before it had risen. But the Fed does not support this approach. Greater economic success (higher GDP and lower unemployment) turns out to predict significant more inflation. So, Alan Greenspan should allocate this part of his strategy and mainly raise interest rates in response to increases in actual in-

FORECASTING THE FED



DATA: FEDERAL RESERVE BOARD, ROBERT J. BARRO

One of the curious aspects of the current prosperity is that the Fed chairman has become some sort of prophet from whom we expect wisdom on all aspects of economic policy. He is now viewed as an expert not only on monetary policy but on technological change, Social Security, fiscal policy, and diversification matters. The fact is that Greenspan is more than a competent economist with the proper stress on price stability and is fortunate enough to be in office when the objective was achievable through a simple interest-rate rule. Some of the favorable conditions for U.S. monetary policy were strong technological progress, expansions of global markets, and reductions in inflation worldwide.

Robin Yount said on his recent induction into the baseball Hall of Fame that he had taken Lou Gehrig's place as the "luckiest man on the face of the earth." I think that the distinction really has to go to Alan Green-

Robert J. Barro is a professor of economics at Harvard University and a senior fellow of the Hoover Institution (rjbweek@harvard.edu).

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Standard & Poor's is running with it.

Their global credit analysis and ratings clientele relies on up-to-date customized information. So they developed a real-time Web-based application called RatingsDirect, and they run it on an iPlanet application server.

Oakley is running with it.

In true Oakley style, they wanted to enter the realm of e-commerce swiftly, and with major impact. So the Sun-Netscape Alliance helped them create the "O" store in under eight weeks.

First Union is running with it.

Together with the Sun-Netscape Alliance, they are building an online bill presentment and payment service that will allow billers to reduce costs and improve customer care.

GTE is running with it.

They wanted to give customers an effortless way to do business online. So they used iPlanet infrastructure applications to build the Network Commerce Platform. On it, GTE hosts iPlanet e-commerce applications, so companies can easily outsource their e-commerce solutions.

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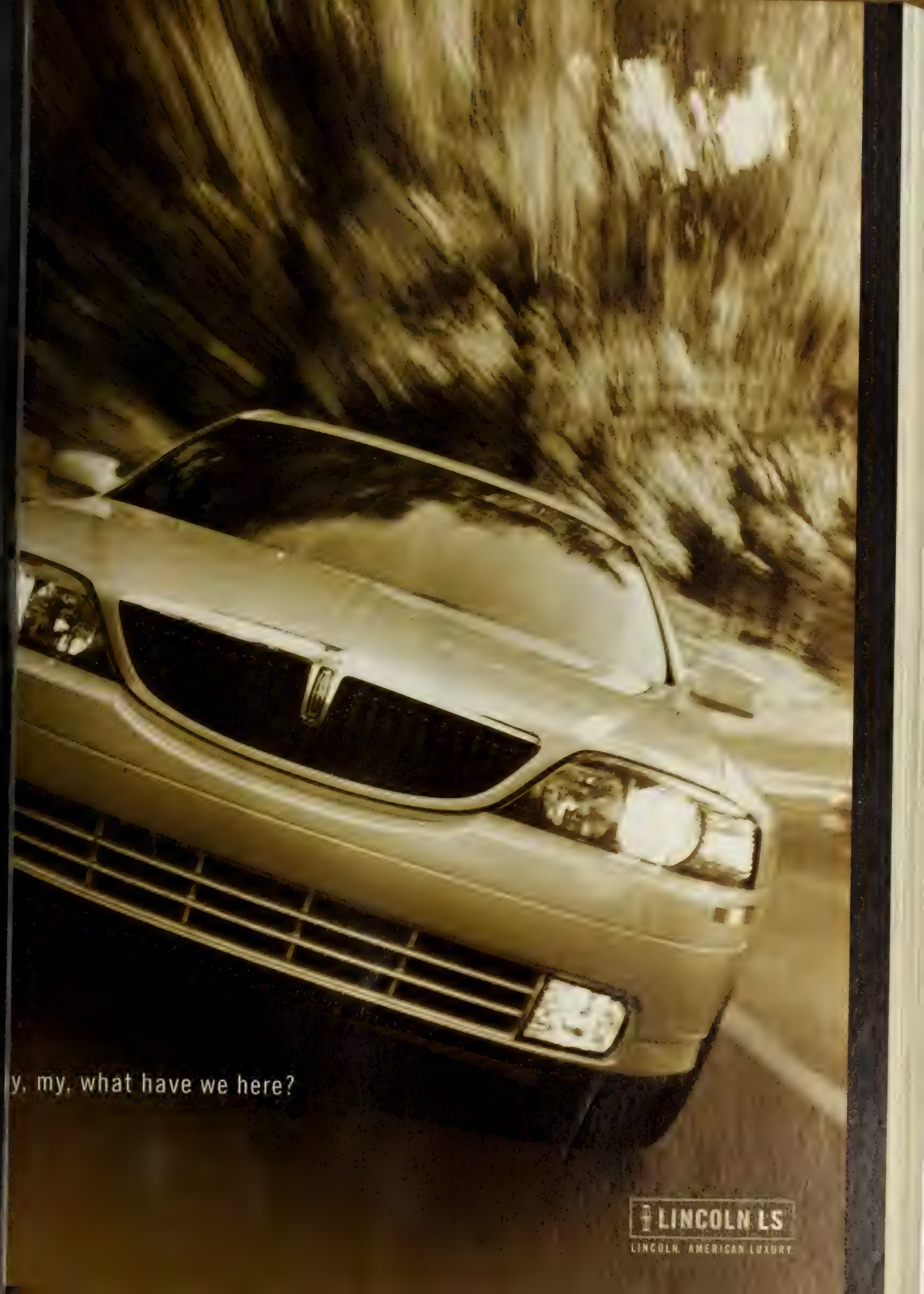
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y, my, what have we here?

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BY PETER COY

WEIGHING THE WEALTH EFFECT

Is it just too hard to predict?

Fed Chairman Alan Greenspan has often worried that the increase in Americans' stock market wealth could cause them to overspend. In a June 17 speech to the Congressional Joint Economic Committee, he said that recent capital gains will "support outsized increases in consumption for many months into the future."

But a new study by two staffers of the Federal Reserve Bank of New York



says there's no reliable correlation between stock market gains and future consumer spending. Economist Sydney Ludvigson and Senior Vice-President Charles Steindel conclude that on average, a lasting \$1 increase in stock wealth leads to a 3¢ to 4¢ increase in annual consumption. But they say that this average is "a very shaky reed to lean on," because at various times the wealth effect has swung from 2¢ to almost 11¢.

Ludvigson and Steindel also say it's impossible to predict how quickly the wealth effect—however big it is—will kick in. It can take years for consumer spending to reach a permanently higher level. "Forecasts of future consumption growth are not typically improved by taking changes in existing wealth into account," they conclude.

Greenspan's ruminations on the stock market seem to assume a more reliable correlation between wealth gains and spending. The New York Fed authors declined to discuss the policy implications of their paper. Says Steindel: "This is a statistical paper. We're not making a forecast of what's going to happen in the current environment."

IS TECHNO SAVVY OVERRATED?

Even the cyber-allergic can do well

Computers are adding to wage inequality, but not for the reasons put forth by former Labor Secretary Robert B. Reich and others, says a new study in Britain's *Economic Journal*.

Reich has argued that computers are raising the productivity and market value of tech-savvy "symbolic analysts" and "knowledge workers." But Stanford University economist Timothy F. Bresnahan says that computers are boosting the fortunes of many highly paid people who have no aptitude for computers.

The key, says Bresnahan, is what he calls "organizational computing." On the bottom end of the pay scale, computers are pushing down the wages of clerks by taking over their low-level functions. At the top end, a talented executive's clever idea can change an organization overnight because it can be embedded in the software that runs the place. "This raises the marginal product of a skilled worker's ideas, even if those workers never see a computer," Bresnahan says. People skills are also more in demand, he says, because organizations must continuously shuffle workers' duties to take advantage of the new powers of computing systems.

WHAT CAN DERAIL JOB TRAINING

A poor work past is hard to defeat

Bad news for the welfare-to-work movement: Training the hardcore jobless for gainful employment isn't as easy as some job-training statistics would make you think. So says a new study by James J. Heckman of the University of Chicago and Jeffrey A. Smith of the University of Western Ontario.

Heckman and Smith find fault with standard methods for measuring the effectiveness of job training. Typically, these studies measure the pay of workers before and after training. But one reason people go for training is that their pay has recently dipped, so the "before" point is artificially depressed.

In their paper in Britain's *Economic Journal*, the authors say that employment history is a valuable and overlooked indicator of how well someone will fare in a job-training program. People who are near retirement or who are

chronically unemployed tend to be interested and do poorly. Says man: "There's an implicit assumption out there that people can be added to the New Economy at a fairly low cost. That's just a crazy mistake."

INCREDIBLE SHRINKING BANKS

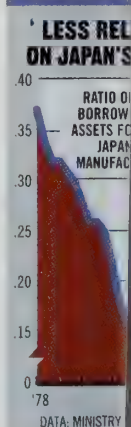
Japan will be trimming lenders

Japan's banking system is in for a "massive contraction" in response to new competition for both its deposits and its lending businesses, says a new working paper says.

The troubles of Japanese banks stem largely from the partial deregulation of the nation's financial system, writes Hoshi, a professor at the University of California at San Diego's Graduate School of International Relations and Pacific Studies, and Anil K. Kashyap, a professor at the University of Chicago's Graduate School of Business. In the early 1980s, the "Big Four" deregulation made it easier for Japanese companies to raise money by issuing bonds instead of borrowing from the banks, they write. To replace the lost loan volume, the banks increased their real-estate lending, which produced first a speculative bubble and then a crash.

Large Japanese manufacturers were the first to wean themselves from bank loans. Their bank debt, which was equal to 37% of their assets in 1978, had fallen to 16% by 1990, around the level for comparable companies in the U.S., the authors say. "Private sectors probably won't reduce their borrowing as much as the large manufacturers have, but even a 20% reduction in lending implies the closure of the lowest-rated 45 banks of 142 banks," they write.

It's not just the loan business that's at risk. The authors note that mutual-fund companies and other financial institutions are making a grab for deposits. Their conclusion: Propping up weak banks and merging them into healthy ones postpones the inevitable shrink-



HUMANIZING THE WEB:

HOW NETSAGE BRINGS SOCIAL INTELLIGENCE TO THE INTERNET

In the maturing domain of Internet commerce, the fundamentals of real-world transactions, from consumer retail to business-to-business, still apply. Things like creating and sustaining branded relationships based on trust. Or using a sales force's persuasive power to build and maintain that trust over the life-cycle of the customer relationship.

"When businesspeople ask me what e-commerce is," says Mark Alexander, senior vice-president of SafariWorks.com, an Internet marketing firm, "I say it's simple: just take away the 'e'. Commerce is commerce, whether it takes place in a boardroom or a browser. The rules of engagement are pretty much the same."

But how can a company follow these rules in an environment dominated by billions of seemingly faceless transactions, especially when an increasing number take place at great distance, often over a notebook computer and a modem? The answer, according to San Francisco, Calif.-based Internet applications developer NetSage: break down the digital barriers—let computer users literally "take their world with them"—by bringing a touch of humanity to the Internet.

HUMAN-LIKE RELATIONSHIPS

Humanity on the Web? The idea sounds so counterintuitive—so oxymoronic—that it just might be worth trying. That was the motivation behind the original forays of NetSage (formerly Agent Based Curricula, Inc.) into humanizing person-to-person interactions on the Web.

"Research on social interfaces has consistently demonstrated that better technology alone is not enough to engage computer users," notes J.B. Holston III, NetSage president, CEO and chairman of the board. "Instead, one must create compelling and socially appropriate interfaces, employing a

unique combination of art, science, and technology" enabling nearly human-like relationships with users to develop over time.

How does it work? Consider the example of a corporate purchasing agent investigating a vendor's products. The agent logs on to the vendor's Web site, where a virtual sales assistant helps her to find the exact products she is looking for. After answering her questions, the sales assistant makes additional purchasing recommendations, customized to the agent's specific needs. And when the agent telephones a week later for support, the virtual assistant remembers their previous interaction, and begins offering the appropriate assistance right away.

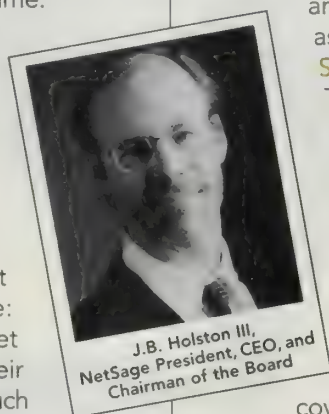
SOCIAL INTELLIGENCE IMPERATIVE

The imperative for human-like social interactions like this on the Web could hardly be greater, with the Internet reaching beyond the early adopters to business users and consumers for whom the computer may be confusing, even forbidding, territory.

A recent study by New York-based Jupiter Communications, a leading Internet research firm, discovered that a resounding 90% of computer users preferred dealing with humans rather than automated systems. And more than 40% of respondents said that having greater human contact would make them more comfortable with online purchasing.

Other research has yielded similar conclusions. A recent Harvard study found that socially intelligent interfaces increased purchasing likelihood by nearly 50% as compared to mechanically automated processes, and repurchase probability rose by a phenomenal 120%. Persuasiveness climbed by 80%, while the perceived quality of information rose by 40%.

AHEAD OF THE DIGITAL PACK
Do findings like these represent an opportunity for



J.B. Holston III,
NetSage President, CEO, and
Chairman of the Board

(Continued)

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HUMANIZING THE WEB

vaulting ahead of the digital pack? NetSage thinks so. Its solution: the Social Intelligence Server (SIS), an artificial intelligence engine based on 20 years of study of the interaction between people and technology. The SIS generates socially appropriate responses by analyzing previous user behavior, evaluating user characteristics, and intelligently interpreting user actions—much as a human being in a similar situation would.

Unlike human beings, however, the SIS automatically collects, maintains, and learns from the results of each interaction with a given user. This is the social intelligence necessary for sustaining personalized dialogs over time. Such an approach takes NetSage several steps beyond the essentially mechanical personalization practiced by leading-edge sites like Amazon.com, which use the collected buying preferences of millions of customers to recommend books and videos to users with presumably similar tastes.

NetSage blends "collaborative filtering" principles like those employed by Amazon with the artificial intelligence embedded in advanced, rules-based "expert systems" to create an entirely new type of personalization—one that not only follows rules, but selectively and intelligently applies previous experiences, from a wide range of sources, to each new situation.

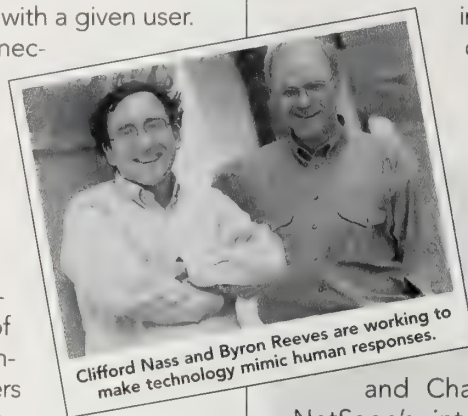
THE KEY INGREDIENT: PERSONALITY

What most sets NetSage apart from other personalization systems, however, may be its rigorous infusion of human factors into its social interfaces. NetSage fully customizes each online digital assistant, or "Sage," giving it a unique personality and communication style—and can even add a fully animated onscreen persona. Beginning this Fall, the application will be able to accept and respond to spoken commands.

This insistence on not just personalizing but literally humanizing online interactions results from some startling findings about the way people interact with computers. NetSage senior vice-

presidents, interface research, Dr. Byron Reeves and Dr. Clifford Nass discovered that people actually expect computers to act like real people and places—and treat them accordingly.

As documented in their 1997 book "The Media Equation," Drs. Reeves and Nass found that people are polite to computers; they treat computers with female voices differently than those with male voices; and they respond physically to intrusive faces and rapid motion on a computer screen in much the same way as they do in the real world. Their conclusion: computer users will also respond more favorably to Internet applications that act in the way that humans would.



Clifford Nass and Byron Reeves are working to make technology mimic human responses.

MIGRATING TO THE DIGITAL WORLD

The corporate world, it appears, is starting to agree. Companies like Microsoft, General Magic, Omron,

and Charles Schwab have deployed NetSage's intelligent social interfaces for everything from desktop assistants and Web-based training to airline ticketing and customer service. But online trends suggest that this is only the beginning.

"We're at the threshold of a massive migration of human interactions from the real to the digital world," contends Holston, who previously oversaw Yahoo! Europe and Ziff-Davis's 100-country publishing operation. "Intelligent social interfaces, which bring desirable human quality to media interactions, will turbo-charge the next generation of friendly, efficient, and people-centric systems."

Few steps could do more to help people "take their world with them" than that.

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WHO SAYS THE ICEMAN COMETH?

Can the economy to heat up again soon, despite a brief chill

S. ECONOMY The surprise of 1999 has been the economy's strength, following the gloomy period last fall when almost all forecasters expected much slower growth this year. Now the word is that real gross domestic product posted an unusually modest gain of 2.3% last quarter, nearly half the first quarter's 4.3% pace and down sharply from the 7.1% gain in the final quarter of 1998. Is the long-awaited slowdown finally taking place? Don't bet on it. For one thing, mild winter weather moderated the strength in the data on construction and weather-sensitive activity in the first quarter. Return to normal weather in the spring resulted in a falloff in those sectors, which was more the result of a lull in the government's seasonal-adjustment than of a slump in real activity. Weather likely will temper some of the upcoming July data as well. The heat across much of the country may have held back retail sales, outside of car buying, while sending output through the roof.

PILEUP WILL SECOND-HALF GDP



More important to the second-half outlook, the GDP data show few signs that domestic demand is waning. The fundamentals of household spending remain as strong as ever. Consumer spending, by itself, has more than accounted for all of the economy's growth in the first half, offset partly by drags from a wider trade deficit and slower inventory

Business outlays for high-tech equipment continue to drive capital spending. Also, after a year of contraction, exports show new signs of life. Demand is likely to stay very strong, labor markets continue to tighten. In fact, the second-quarter gain in employment costs suggests that last year's downturn in pay and benefits may have run its course, though the big quarterly gain probably overstates the trend.

KEY BOOST to second-half growth is sure to come from more inventory building, which is separate from precautionary stocking that companies will do in the face of Y2K computer worries (chart). Demand has been so strong that inventory growth in the second quarter was unsustainably low in an economy this

strong. The restocking effort, in addition to stronger exports, will fuel the manufacturing rebound.

Inventories grew by a mere \$19.4 billion in the second quarter, half of the first-quarter increase and well below the \$50 billion pace averaged in the second half of last year. During the past year, final sales of goods have grown twice as fast as inventories. To be sure, computerized systems have allowed companies to run leaner, but stockpiles are now so low that some companies may be unable to fill orders in a timely manner, thereby threatening the loss of sales. In June, factory inventories fell 0.1%, as shipments jumped 1%, pulling the inventory-sales ratio down to a record low of 1.31.

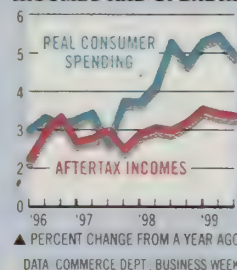
Overall domestic demand last quarter grew 3.9%, down from the first quarter's blistering 6.8% pace. That slowdown is misleading, however. Consumer spending grew at a healthy 4% pace in the second quarter, but that followed the first quarter's 6.7% surge—the largest increase in more than a decade—which was aided by mild weather and by the stock market's strong rebound from its autumn tumult.

The trend in consumer spending still shows growth of 5% from a year ago (chart), and car buying began the third quarter at a strong 17.1 million annual rate. Income growth alone is strong enough to support most of that 5% trend, and wealth gains will contribute much of the rest. Personal income rose 0.7% in June, and real disposable income is growing 3.4% per year. As long as job markets stay tight, income growth at that pace can be easily sustained in the second half.

SO FAR, LABOR MARKETS show no sign of loosening up. Indeed, initial claims for unemployment benefits in the July 24 week matched an expansion low. Also, the second-quarter employment cost index—a reading of what companies pay out in hourly compensation, including wages and benefits—jumped 1.1% from the first quarter, the largest increase in eight years.

That gain might not have been as big it looked, though. Keep in mind that the ECI in the first quarter rose only 0.4%, the slowest pace on record. The gyrations mainly reflected a dearth of bonus payments in the finance industry in the first quarter, a result of the

THE WIDE GAP BETWEEN INCOMES AND SPENDING



fourth-quarter turmoil on Wall Street. As Wall Street rebounded, second-quarter bonuses surged.

During the past year, wages and benefits have grown 3.1%. That's up from 2.9% in the first quarter, but compensation growth hit an expansion peak of 3.6% in the third quarter of 1998. Labor costs are still growing only moderately, but the slowdown appears to have ended. Tight job markets mean that renewed acceleration may well be in store for the second half.

MANUFACTURING IS THE SECTOR that is best situated to benefit from continued strength in demand, especially with inventories so low and with foreign demand accelerating. The National Association of Purchasing Management said that manufacturing continued to improve in July after last year's slowdown, although activity proceeded at a slower rate than in June.

Still, two key indexes from the NAPM survey point to the firming trend in demand: More companies reported slower delivery times than at any time in more than 1½ years (chart), and more purchasers reported rising prices of materials than in nearly two years. Taken together, those readings clearly show that markets for manufactured goods are tightening up, and that operating rates are likely to rise.

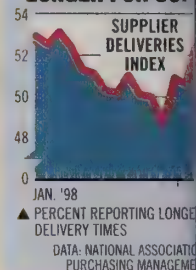
The only slowdown candidates for the second half are housing and capital spending. Thirty-year fixed mortgage rates have broken through the 8% threshold

that typically begins to dampen home demand, ready, the trend in mortgage applications to home has taken a downturn. However, with consumer fundamentals so solid, any sudden collapse in housing is unlikely, although the sector will not be contributing to second-half growth.

Capital spending is likely to be a mixed story. Equipment outlays grew by a strong 15.3% last quarter. But most of that gain occurred in information technology, while spending in industrial machinery, transportation equipment, and other items is growing more slowly than it was a year ago. Also, spending to fix Y2K problems is likely to slow as well, as more companies finish debugging process and hunker down to see what Jan. 1 brings.

Slower trends in capital spending and housing trigger the hoped-for soft landing, however. Companies have to rein in their purchases further if the economy is to avoid the production constraints and worsen labor shortages that typically generate inflationary pressures. For now, though, households seem oblivious to that possible scenario. They're too busy shopping.

COMPANIES ARE WORRIED LONGER FOR SUPPLIES



BRITAIN

THESE WERE THE KINDEST CUTS OF ALL

Three cheers for the Bank of England. Its Monetary Policy Committee has steered the economy away from recession via interest-rate cuts totaling 2.5 percentage points since October. Now, with the policy rate at a 22-year low of 5% and the economy rebounding strongly, the MPC may have to start plotting a course for higher rates, even though inflation is falling and British rates are twice those in the euro zone.

The recovery is clear from the broad pickup in second-quarter gross domestic product, which rose 0.5% from the first quarter, or 1.8% at an annual rate, after near-stagnation in the two previous quarters. Growth

from a year ago is now 1.2%, boosted a bit by revisions to domestic demand in previous quarters. Services, up 0.5% in the quarter, continued to lead growth. Construction also rose, and manu-

facturing, previously beset by sagging exports and the pound's 22% gain since 1996, posted its first advance in a year, despite the sterling's continued strength.

Even with the recent malaise, domestic demand has remained strong. Consumers

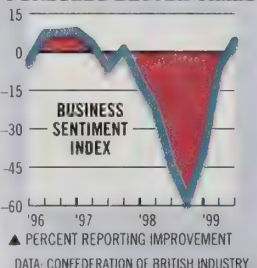
are spending freely, with the jobless rate at a 19-year low of 4.5%, and housing demand has taken off. Also, the Confederation of British Industry's July survey shows business confidence at the

highest level in 1½ years (chart).

Given the stimulus to domestic demand from past rate-cutting, well as from stronger exports, growth seems likely to accelerate eventually putting upward pressure on wages and prices. Underlying retail inflation is only 2.2% below the MPC's 2.5% target, and it may dip lower. However, the economy is recovering at a relatively high level of labor and capacity utilization, especially in the large service sector. Economists generally expect inflation to pick up again by early next year, as imported deflation runs its course.

Depending on the recovery's strength, the MPC may see the need for some preemptive tightening before the end of the year. Utilization rates and wage growth are likely to be key areas of focus for the MPC in the months ahead.

BRITISH INDUSTRY FORESEES BETTER TIMES



THE GREAT NET STOCK SELL-OFF

Now, investors want more than just a "dot.com" before they buy

This summer, Internet stocks have taken their worst beating since the Net craze started. Dozens of Internet stocks, such as TheStreet.com Inc. and Marketwatch.com, are hitting new lows. The most widely held stock in the group, America Online, is down almost 32% since July 9, and other cyber blue chips, such as Yahoo! and Amazon.com, have also suffered similar slides. Initial public offerings of dot.com shares are also suddenly sinking, rather than soaring at birth. Overall, the sector as measured by the Goldman Sachs Internet Index plunged almost 30% between July 9 and Aug. 4, and now stands nearly 43% below its all-time high in April.

To some observers, this looks like the long-predicted puncture of the Internet bubble. "This is a real liquidation, not just trading action," says Patrick Manning, a technology portfolio manager for hedge fund Perry Partners in New York. "We're entering a period where there's heightened discrimination on the part of investors of what they will buy. Over the next five years, more than half of the companies that have gone public will likely be out of business."

That may be extreme. But the signs of a possible shakeout are there:

- Companies ranging from eBay to theglobe.com have turned in disappointing

revenues or exceeded expected losses.

- Once-profitable companies such as CNET are deciding to go into the red as they plow money into massive marketing campaigns to grab "eyeballs."

- Online retailers are slashing prices to keep volume up, cutting into earnings or postponing profitability.

- Internet brokers may face the first-ever decline in trading volume in the third quarter.

- Four Net IPOs launched on Aug. 4 fell below their offering prices, despite expectations that at least a couple would sell at lofty premiums. The average Internet IPO this year is off 18% from its opening price.

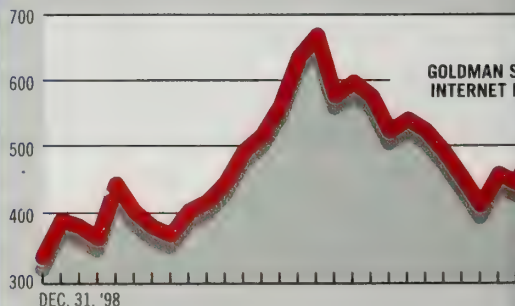
- Statistics about Web traffic indicate that growth may be slowing, particularly in the number of consumers going to "portal" sites.

The good news is that few people are predicting much more of a decline from here. But the ranks of Net skeptics are swelling rapidly. "First-quarter Internet results were spectacular," says Steven Shapiro, president of the technology fund Intrepid Capital Management in New

York. "But in the second quarter the marquee companies' growth slowed, and management talked widening losses ahead."

Perhaps the biggest chill has come from the slowing of revenue growth in an industry where earnings are as a gauge of value. Now that revenue growth is wobbling. Take Amazon.com. Its revenues are still expanding, but its operating rate has been cut in half. At the same time, Amazon has unveiled plans for increasing spending—and losses—for the next six months as it builds up warehouses and distribution centers and enters into new lines such as toys. As for First Call Corp., analysts now

INTERNET STOCKS ARE PLUNGING



DATA: BLOOMBERG FINANCIAL MARKETS

of \$1.84 a share for
up from an earlier
consensus of 91¢.
Amazon's troubles, an-
st conclude, fore-
similar problems
rds. Says Frederick
rick, head of Ko-
unds: "When Amazon said
d be spending a lot more,
is a message to everyone that
is on the Internet would be a
re competitive and costly. A
it has to occur."

nwhile, America
s growth is de-
Its subscriber
rew by 4.5% in
cond quarter, to 17.6
, but that was down
11.9% in the prior quar-
ter. And Paul Cook,
lead portfolio man-
ager at \$2 billion
Munder NetNet fund,
says he's concerned about
challenges in Europe.

Bay Inc., a 22-hour outage on the
site in June caused revenues for
cond quarter to fall short by \$5
. And for the first time, the com-
seems headed for an operating loss
third quarter because eBay feels
ed to spend more to generate
t. "There's some concern that the
economy is growing past its limits," says

h flying community-site
e.com missed its estimates by a
y mile on Aug. 2. Instead of the
med 32¢ loss, the company reported
loss. Since April, the company's
capitalization has slipped from
1 billion to around \$320 million.
venue decline isn't the only factor
worrying Net analysts and in-
s. Instead of more profitable Net
nies, there are fewer. CNET Inc.
aced in June that it's launching a
e ad campaign to bring more con-
s to its site, which will take it into

the red. Its stock has
since dropped by 62%.
E*Trade, a once-profitable
company whose stock is off
more than 67% this year, is
also now losing money be-
cause of its advertising spend-
ing. Meanwhile, on Aug. 3,
Credit Suisse First Boston
analyst Bill Burnham pre-
dicted that online-trading vol-
ume would decline this quarter.
That cast a pall on E*Trade and
other online brokers.

S. Jerrold Kaplan, CEO of Internet
retailer Onsale Inc., admitted that
when Onsale charged higher prices to
its customers, its revenue growth
slowed. So during the most
recent two quarters, Onsale
has seriously lowered its
prices. Not surprisingly, the
company has achieved a 20% growth
rate in the most recent quarter as op-
posed to its previous 15% rate. But On-
sale's margins
have dropped
from 8% to 3%.

"We are being com-
petitive on pricing in
order to maximize the
likelihood of continued high
growth," says Kaplan.

Then, there are those storied
Internet IPOs. Now, they're fol-
lowing a different plot line. The
deals are still coming. About 40
Net IPOs were launched last year.
This year, 125 had been launched
by Aug. 4, and 100 are registered
to go public before yearend. But the
poor performance of the Net IPOs since
Net stocks began their plunge bodes ill.
Says Christopher R. Ely, portfolio man-
ager for Loomis, Sayles & Co.: "It looks
bad. Real bad." He adds: "Institutions
are stepping back and asking what is
this really worth?" So, too, are investors
apparently.

Internet companies insist that the out-
look for the industry remains unchanged.

	DECLINE FROM 52-WEEK HIGH	STOCKS	DECLINE FROM 52-WEEK HIGH
ATCH.COM	-79.0	EARTHLINK NETWORK	-59.4
ET.COM	-72.6	EXCITE@HOME	-58.6
	-70.4	CMGI	-53.9
	-67.1	REALNETWORKS	-53.8
COM	-60.0	YAHOO!	-50.4
ING ENTERPRISES	-59.8	AMERICA ONLINE	-50.1

DATA: BLOOMBERG FINANCIAL MARKETS



One sign: On
Aug. 3, Venture-
One Corp. reported
that \$3.8 billion had
gone into Net companies in
the second quarter, more than half of
the total venture capital invested in the
period. Still, some investors are betting
that the growth rates are slowing. "We
have left the parabolic growth phase of
the Internet. There's a hell of a lot of
people online already," says Patrick Man-
ning. "The growth in users coming online
is slowing significantly and will be much
more closely linked to the growth in PC
sales which is about 15%. It's hard to
say where the bottom is, but it doesn't
look like it's bottoming yet."

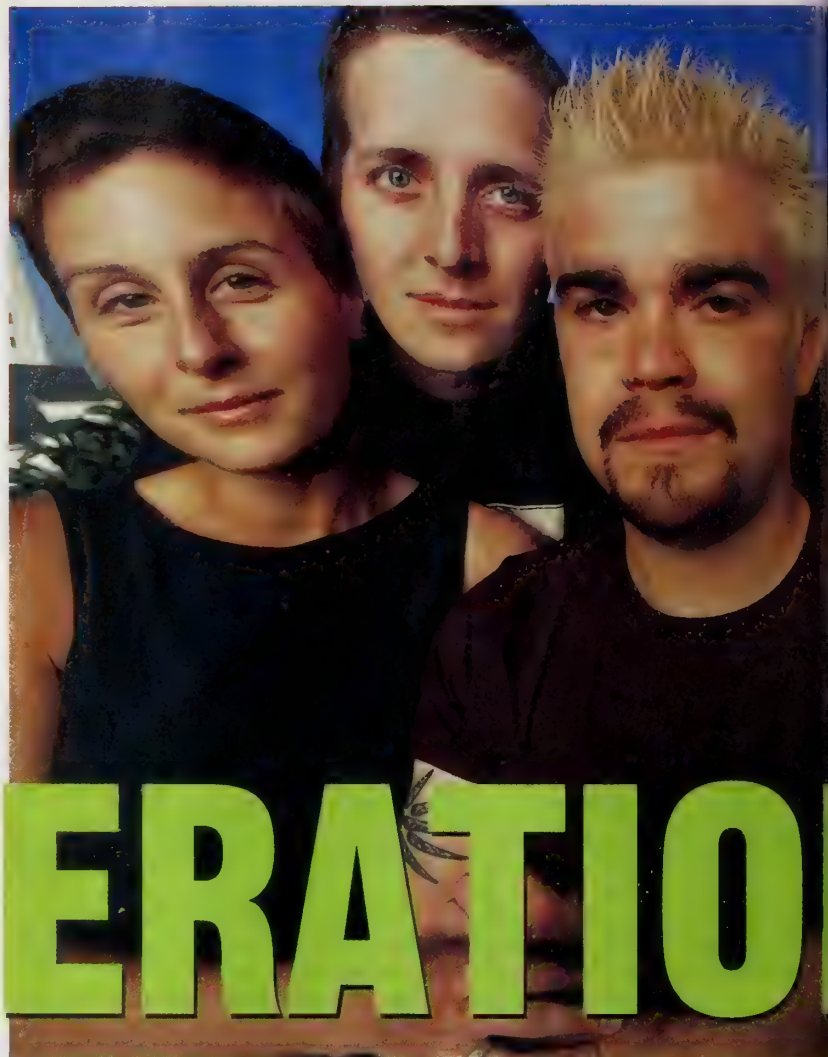
The Internet stock boom isn't going to
turn into a bust, at least not soon. But
recent market jitters are giving Wall
Street—and Silicon Valley—a healthy
scare.

By Debra Sparks, with Jeffrey M. Lar-
derman, in New York

BusinessWeek **ONLINE**

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Money. BMWs. Options. Talent-hungry tech companies will go to any length to hire a hotshot



GENERATION

You could say Anthony Batt is always in play. In the past eight months, the spikey-haired high school dropout has worked as director of site development for Time Warner Inc. as well as director of production at women's online network iVillage.com. That's not to mention his current gig—vice-president for technology at a hot new Los Angeles startup called Lemonpop.com. In the process, the 32-year-old chief technology officer-in-the-making has doubled his salary and is negotiating for options on at least 10,000 Lemonpop shares.

A decade ago, a corporate carpetbagger such as Batt would have been blackballed by leery employers. But this self-described "edgy freak," who sports a uniform of T-shirts and khaki cut-offs, has never been more in demand. Recruiters continue to hound him like love-crazy girls. "Like I've broken up with them or something," Batt says.

Batt and sought-after Gen Xers like him are benefiting from the New Economy's insatiable demand for talent. Two-

year employees are now grizzled veterans. Diplomaless, JAVA-cranking programmers are often more valuable than executives with a decade of experience. "There's a constant auction going on out there," says John A. Challenger of employment-tracking firm Challenger, Gray & Christmas Inc. Even when an employee has just landed at a new job, "They want to be exploring one that might be even better," Challenger says. "It's like a permanent job search."

ELITE FORCE. Workers like Batt are still a small elite, just about 1% of the total workforce, but their outsize gains may be moving the job market. When the Bureau of Labor Statistics issued its employment-cost index for the second quarter, it cited huge pay gains in financial services, real estate, and insurance as reasons for the larger-than-expected jump in compensation (page 36). Wall Street firms, for example, are now paying three years' worth of guaranteed bonuses of up to \$5 million annually to keep managing directors from jumping ship. Meanwhile, starting salaries for

computer programmers have shot up 18.4% this year alone (chart)—vs. 2.7% for the typical factory worker.

The twenty- and thirtysomethings with the right stuff know they're valuable, and they're cocky enough to play a bit of day-trading with their careers. And not just in Silicon Valley or on Wall Street. Consulting, law, and accounting firms—even stuffy old sumer-goods companies—are fighting to keep the best from being poached by the way of the Internet start-ups.

"Our people are under siege," says Deborah K. Holmes, director of Employee Relations at Ernst & Young's Office for Retention. O'Connell Holmes's competitors even go so far as to pay a several-thousand-dollar bounty per head for any Ernst & Young recruit—from concierge to consultant—whose departure is sight unseen.

In Chicago, Deloitte & Touche is paying up 21-year-old accounting interns in subsidized luxury apartments with warden's maid service and Lake Michigan views. That's on top of free laptops and salaries of \$3,400-per-month, plus overtime



TRAVELING IN PACKS:

Sean Suhl (center) and some of the gang he wooed from Digital Entertainment Network to Lemonpop.com, an online network for Generation Y

Nick Brady at Dillon Read or John Whitehead at Goldman, Sachs & Co. would have tossed them out. But the labor squeeze is forcing even top firms to match the offers—and ante up some more options to boot.

Across the country, businesses are scrambling to hold on to workers that they have gone to great lengths to find. Silicon Valley is rife with tales of recruiters who prowl company grounds hoping to pick off defectors. One headhunter even had a catering truck outfitted with coffee, doughnuts, and wireless technology for transmitting résumés. Appearing in the parking lots of companies whose stock had taken a sudden dive, “The Deathmobile,” as programmers called it, was there to spirit away staffers looking for a fresh batch of options.

COMRADES. It isn’t hard to find workers who are willing to listen—and recruit their pals. When 24-year-old Sean Suhl left his job as head of interactive for Los Angeles’ Digital Entertainment Network for a gig as chief creative officer of Lemonpop.com, he cleaned out his desk and part of his department, luring a dozen Webheads with him. “It’s like being a film director,” says the platinum-haired Suhl from a cell phone in his Mercedes SLK 230 convertible. “You do a project, and you move on.”

Among Web startups, it’s not uncommon for packs of friends to demand to be hired together. Suhl’s boss, Digital Entertainment Network Chief Executive James H. Ritts, understands the way the ground has shifted. “You know there will be some level of churn,” he says, mildly.

Companies can wind up paying in lots of ways for the rare talent they seek—including settling for second-best. “Some recruiters will just keep sending someone until maybe they are good enough,” says David Sterenfeld, a principal with Phoenix recruiter Corporate Dynamix, which specializes in placing technology salespeople. Or businesses are putting people in jobs two levels above where they might normally land at this point in their careers.

That makes companies go to even greater lengths to snag a promising applicant. Some employers hold job candidates “hostage” by intentionally keeping them for a whole day of meeting and greeting so that they won’t be able to attend interviews at rival firms, says Michael Dsupin, district manager for headhunter Atlantis Partners’ San Jose, Calif., branch. Managers have called Dsupin and asked him to cancel an applicant’s other job interviews that day by proclaiming: “We’re keeping him.” The captor then offers the candidate a job on the spot. Says Dsupin: “There’s no three-step interview process anymore.”

Even white-shoe venture-capital firms such as Kleiner Perkins Caufield & Byers are not immune. To keep top-level talent in the pipeline for the next hot startup, Kleiner has a “CEOs in Residence” program where it parks executives. They get paid a CEO salary, attend partner meetings, look at deals, and when the right startup comes along, they sign up.

Some Web companies that don’t have the benefit of Kleiner’s cachet are so squeezed for talent they are offering

scenario gets rosier the higher. On Wall Street, one of the games professionals play has to do with the market. It has to do with nabbing a new offer from a firm that doubles your already multimillion-dollar salary. Then these job-seekers dangle their gilded compensation packages in front of their current bosses. In the old days,

ERE RAISES

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ng salaries
1999
ases for
ted IT jobs

OCCUPATION	ANNUAL SALARY RANGE	1999 INCREASE
PROGRAMMER	\$38,000-\$50,500	18.4%
DATABASE ADMINISTRATOR	\$61,250-\$88,000	16.3%
WEB MASTER	\$51,500-\$73,000	14.7%
SOFTWARE ENGINEER	\$55,000-\$80,000	12.5%
E-COMMERCE SPECIALIST	\$45,000-\$73,000	12.4%
PROJECT MANAGER	\$60,000-\$80,750	10.0%

OCCUPATION	ANNUAL SALARY RANGE	1999 INCREASE
SOFTWARE DEVELOPER WITH INSTALLATION AND DEVELOPMENT EXPERTISE	\$50,000-\$65,000	9.5%
NETWORK ADMINISTRATOR	\$42,750-\$59,750	7.9%
CHIEF INFO. OFFICER	\$113,500-\$180,000	4.4%
HELP DESK MANAGER	\$67,500-\$85,500	3.4%

DATA: RHI CONSULTING

speed-vesting so stock options can be exercised in two years instead of the standard four. Other businesses are offering no-strings signing bonuses.

BRIBES. But is handing out free BMW Z3's—as Revenue Systems Inc. in Alpharetta, Ga., does—really good for business? “Companies are basically just coming up with more and more creative bribes to get people to go back to

the old-fashioned career path: pay dues and climb the ladder,” says 32-year-old Gen X management consultant Bruce Tulgan of RainmakerThinking. Some might find that unbearably ironic, considering employers are the ones who did away with the corporate-lifer idea in the first place.

The great talent search isn't all carrots. Recruiters in California, for ex-

ample, have come up with a shtick: At hiring, workers sign solicitation agreements, which bind them against raids. Still, the demand for talented workers is changing the rules—perhaps making the employer-employee compact a little less everywhere.

By Michelle Conlin in New York with Laura Cohn in Washington

WAGE INFLATION: JUST A PHANTOM AFTER ALL?

By now, Fed-watchers everywhere know what Alan Greenspan's favorite barometer of inflation is. It's the Employment Cost Index (ECI), which attempts to measure the total change in wages and compensation throughout the workforce. So there was a simple reflex on Wall Street when the second-quarter ECI registered an unexpectedly high 1.1% gain: sell, sell, sell. The Dow Jones industrial average plunged nearly 200 points on July 29, and bonds plummeted as the yield on the benchmark 30-year Treasury bond shot up to 6.07%. Yields have since continued to rise as stocks have gyrated.

But the Street may have misunderstood the ECI's signal. Sure, the second-quarter runup looked big compared with the first quarter's 0.4% jump, and it was considerably higher than the 0.8% increase economists expected. But investors failed to look at the number the way Fed policymakers do: on an annualized basis. Between June, 1998, and June, 1999, the ECI rose just 3.2%. That's actually less than the 3.5% gain posted in the prior 12 months. “I don't see anything in the behavior of these numbers that would heighten my inflation concern beyond the level of recent quarters,” says Richmond Federal Reserve Bank President J. Alfred Broaddus Jr., one of the central bank's leading inflation-phobes.

TAME FIGURES. In fact, the Fed may not feel it has to hike rates at its Aug. 24 policy meeting. One reason is the surprisingly tame gross domestic product figure that came out the same week. It showed that second-quarter growth slowed to 2.3%, down from the first quarter's torrid 4.3% rate.



WHAT ARE THE SIGNS?

Wall Street expects a rate hike, but the Fed will look at productivity and jobless figures before deciding

And beneath the surface, even the second-quarter ECI surprise isn't so scary. Most of the jump came from fat bonuses paid to a select portion of the workforce: mortgage brokers, stock traders, and investment bankers. Thanks to commissions linked to a robust housing market and sizzling stock trading, their compensation rose a strapping 3%.

Outside of a few other hot job categories, however, a different picture emerges. Manufacturing workers saw

compensation increase only 0.6%, construction workers, only 0.5%. Both numbers were in line with wage trends. “It's hard to say we're on the verge of a wage-price spiral,” concludes Mark P. Vitner, economist at First Union Corp. in Charlotte, N. C.

Furthermore, none of the compensation data take into account going productivity gains. Fed insiders calculate that, at current productivity levels, annual wage increases of up to 4% are manageable. Says Federal Reserve Governor Edward W. Kelley Jr.: “Our productivity gains have been so strong that the unit cost of production has remained flat, which is wonderful.”

So, if the ECI turns out to be harmless, what will the Fed focus on before rendering a verdict at its next meeting? Topping the list will be the July employment report due out on Aug. 6. The Fed will rely heavily on the August release of second-quarter productivity data. In particular, the governors will look at the rate of productivity growth for nonfinancial corporations, which is considered a more precise measure of efficiency because it strips out Mom-and-outfits and banks, whose productivity is especially hard to gauge. Finally, consumer and producer prices will be out mid-month.

If any of these indicators set off alarm bells, then the Fed could order another interest-rate hike. On the basis of Greenspan's favored gauge—the ECI—there seems to be little conclusive evidence of inflation to force its hand. That still leaves financial markets ready to twitch at the next sign of a sinister economic indicator.

By Laura Cohn in Washington

COMMENTARY

By Michael J. Mandel

THE SPOILS OF THE NEW ECONOMY BELONG TO HIGH TECH

Construction is booming, and consumers are snapping up cars, homes, and all manner of goods and services—as they always do during an expansion. Yet the economic data tell a more complicated story: The growth in this expansion is concentrated in the high-tech information sector. Over the last three years, growth in the gross domestic product has averaged a stellar 3.8%. Take out high tech, however, and the rest of the economy is growing at a moderate rate, just slightly above the pace of the 1980s.

The latest data from the Commerce Dept. show an even wider divergence between the fortunes of the information sector and the rest of the economy. The growth rate in the second quarter fell sharply, to 2.4%—and all of the slowdown was in the low-tech. Business spending on information technology actually accelerated during the quarter. This continued expansion of New Economy industries is good news for the long-term future of the U.S. economy. These are the fast-growth, high-price industries, and as they come to a bigger share of output and employment, it means the U.S. can maintain a higher growth rate without inflation.

In fact, the Information Revolution is following the same pattern set by the economic waves of the past. Historically, the early stages of major technological changes are marked by explosive creation of dynamic new industries and markets. Productivity and profits soar in the new industries, attracting workers and capital. As these fast-growing innovative sectors become significant chunks of the economy, they lift overall productivity. The new technology also lifts efficiency in "old-line" industries, too, though more slowly and less dramatically.

The classic example is the technological revolution of the late 1800s and the early 1900s. During that period the "old economy" was agriculture, which accounted for some 35% of U.S. economic output in the 1880s. As new technologies such as the internal-combustion engine and electrification

arrived, they showed up much sooner in the industrial sector than in the agricultural sector.

The U.S. still experienced a sizable productivity boost—but not surprisingly, most of the gains came from industry. From 1889 to 1929, farm productivity only rose at an average annual rate of 0.9%. By contrast, manufacturing racked up 2.4%

annual productivity gains over the same period.

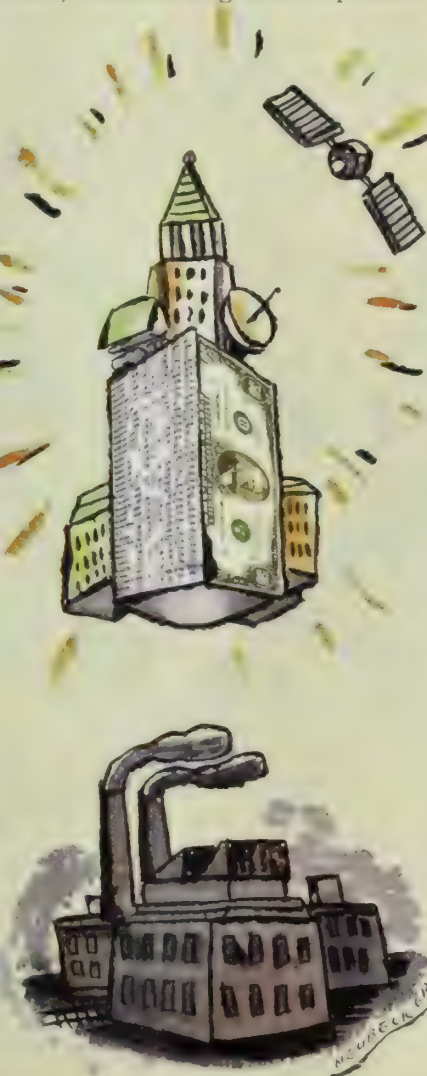
Much the same thing is happening today. It only makes sense that information technology should be having its earliest impact on businesses where the main output is information. Industries such as communications, financial services, and media are able to take full advantage of the exponential growth of information-processing power to get a quantum leap in productivity.

On the other hand, businesses that produce tangible goods or provide personal services, like haircuts or lodging, are finding productivity gains smaller, slower, and more difficult to achieve. A hotel can computerize its reservation system, but its rooms still have to be cleaned the old-fashioned way.

LOW TECH. Robert J. Gordon, an economist at Northwestern University, argues in a new paper that, outside of high tech, manufacturing productivity may not have accelerated at all in recent years. That position is supported by a BUSINESS WEEK analysis of the Federal Reserve's industrial-production data that suggests productivity growth in non-high-tech manufacturing grew at an annual rate of 2.3% over the last three years, nearly identical to the previous decade's average.

The concentration of productivity gains thus far is also reflected in profits. Corporate profits rose nicely in the second quarter, according to the latest BUSINESS WEEK Corporate Scoreboard (page 88). But of that gain, some 80% came from companies in New Economy industries, even though they only account for 30% of revenue.

A century ago, the U.S. went through the turbulent process of shifting labor and capital from a slow-growth agricultural economy to one dominated by fast-growing manufacturing. Today, it's the explosive information sector that is garnering a growing share of the economy's resources—and as long as that continues, so will the New Economy.



WINNERS Some 80% of second-quarter profits came from New Economy companies, though they account for only 30% of revenue

Michael Mandel covers the New Economy.

CHEMICALS

FORMULA FOR A PERFECT MARRIAGE?

Dow and Union Carbide both bring strengths to their union

They say that the chemistry was just right. For years, William H. Joyce, the chairman and CEO of Union Carbide Corp., had bantered with his buddy William S. Stavropoulos over various issues confronting the chemical industry. When the collapse in commodity prices threw the industry into a tailspin a year or so ago, however, their fates diverged. Stavropoulos, president and CEO of Dow Chemical Co. in Midland, Mich., had sold off its Dow-Brands consumer product division, including Saran Wrap, to S.C. Johnson & Son Inc. in 1998 to refocus on its core businesses. He also launched it into higher-margin endeavors such as biotechnology, and steered the company through the industry's rough patch.

DINNER DEAL. On the other hand, when the crunch came, Joyce was caught in low-margin businesses and was in the midst of investing in new plants. Union Carbide's earnings collapsed with a 53% plunge in the second quarter of this year as its stock lagged behind the sector.

Now, the fates of the two companies are converging: On Aug. 4, Stavropoulos and Joyce announced a plan to merge their companies into what will become the world's No. 2 chemical company. The men began negotiating in May, after Stavropoulos concluded that Dow had to bulk up in a consolidating industry if it was to compete effectively against No. 1 DuPont Co. and other global players. His pal Joyce, who says their friendship goes back 20 years, was open to the idea. In late July, the duo and their chief financial officers

met in a Brewster, N. Y., restaurant to settle the details.

The deal isn't cheap. Dow is to pay \$11.6 billion in a stock swap, including assuming \$2.3 billion of Union Carbide debt. Union Carbide shareholders will get 0.537 share of Dow for each Union Carbide share, with their stock valued at a 37% premium over its Aug. 2 closing price of \$66.96, leaving them with what amounts to a 25% stake in Dow. "It's a great deal for Union Carbide investors," says Frank J. Mitsch, a senior analyst at New York's Deutsche Bank

Alex. Brown. Union Carbide's soared 21% on the news, closing on Aug. 4. Dow closed down 6% and Stavropoulos will be president of the combined company and Joyce stay on as vice-chairman.

For the team in Danbury, the bound to be bittersweet. Union Carbide has faced a litany of woes in recent years, from troubled partnerships in places like Kuwait to delayed openings. Joyce also spent heavily on new facilities, but the payoff eluded the company. When oil prices soared and commodity chemical prices rebounded this year, it became clear that Union Carbide was vulnerable. Joyce concluded that merging was the only way to realize his vision for the company. "I don't want you start out wanting to be a seller," says Joyce.

want to be a full company

The new company, which is based in Danbury, will together merge

50,000 employees

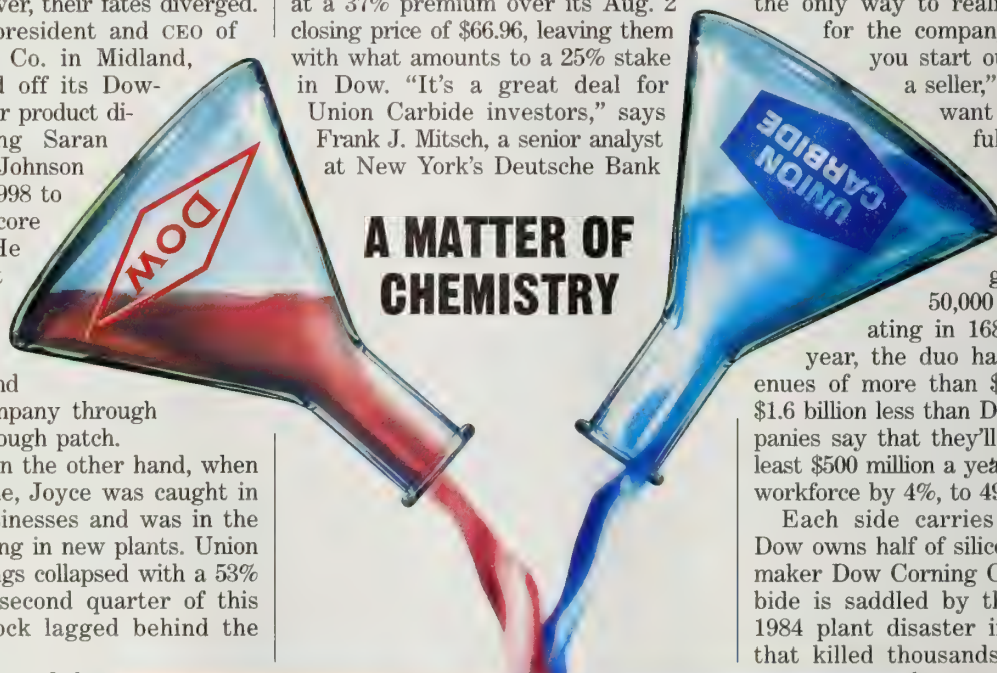
operating in 168 countries

last year, the duo had combined revenues of more than \$24 billion, \$1.6 billion less than DuPont. Both companies say that they'll trim costs by at least \$500 million a year and produce 4%, to 49,000 people.

Each side carries some baggage. Dow owns half of silicon breast implant maker Dow Corning Corp.; Union Carbide is saddled by the legacy of a 1984 plant disaster in Bhopal, India, that killed thousands. But the

deal between the two companies was as fortuitous as the union of Salome and Barney calls it a "major positive event that shows discussions through global chemical because it will not and consolidate product lines, and fully lead to priority. For him, the drawback is a deal makes Dow a lot more committed." That's the folks at Union Carbide won't be heard.

By Diane Green, Greenwich, Conn.



DOW CHEMICAL		UNION CARBIDE
Midland, Mich.	HEADQUARTERS	Danbury, Conn.
William Stavropoulos, President and CEO	OLD TITLE	William Joyce, Chairman and CEO
President and CEO, Dow Chemical	NEW TITLE	Vice-chairman, Dow Chemical
\$18.4 billion	1998 REVENUES	\$5.7 billion
\$1.3 billion	1998 PROFIT	\$403 million
39,000	EMPLOYEES	11,600
Plastics, herbicides, and a variety of chemicals, including those used in Styrofoam insulation. Sold off consumer brands, including Saran Wrap and Fantastik.	PRODUCTS	Basic and specialty-chemicals, including those used in antifreeze and polyester. Also exited consumer markets where it sold Eveready batteries and Prestone antifreeze.

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LET'S MAKE A DEAL: *are not likely to shrink*

Motors," says David B. auto analyst at Burnham Securities in New York. "liminary numbers indicate the foreign brands had the market, while 28%."

And those July sales come cheap. Even true sport-utility vehicles sweet rebates and firm deals. Dodge recently a \$1,000 rebate on Ram ups, and there may be to come. Conference s Gary C. Valade, D Chrysler's purchasing says the company's ince now averaging \$1,470 p hicle, aren't likely to

LETTER FROM MICHIGAN

FOR CARMAKERS, 'WIDE EYES AND WHITE KNUCKLES'

Sales are red hot, but execs are already fretting about a slump

After the sweltering heat wave that paralyzed the Midwest, auto execs gathering in Traverse City, Mich., on Aug. 4 for their annual summer confab welcomed the cool breezes off Lake Michigan. But more than a few worried that a similar chill might hit a car market that has been red hot all summer.

The patter among execs as they scarfed down the town's famous cherry pie centered on the growing suspicion that the U.S. auto market is downshifting. That's hardly a disaster, since most analysts are still predicting 1999 sales will reach about 16.5 million cars and trucks, handily topping 1986's record of 16.1 million.

Trouble is, no one is sure how far sales might sink. Those in the industry who aren't deluding themselves, says Price-waterhouseCoopers partner J. Ferron, are the ones with "wide eyes and white knuckles." Adds Donn J. Viola, COO of auto-mirror maker Don-

nally Corp.: "A little bit of a slowdown is perhaps a welcome relief... if it's just a breather and not a gasp."

What spooked the industry? First, DaimlerChrysler's second-quarter earnings were unexpectedly weak. Chairman Robert J. Eaton's explanation provided little comfort: "The economy is still strong, but we have pretty well exhausted the demand out there."

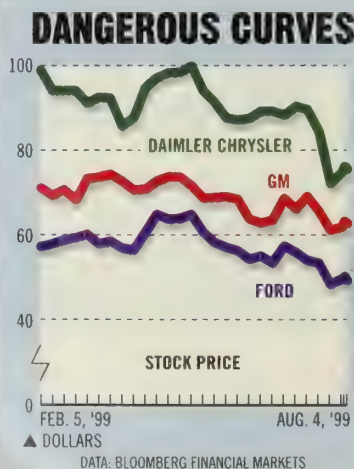
Then, as the industry converged on the Grand Traverse Resort, July sales numbers started appearing. The totals

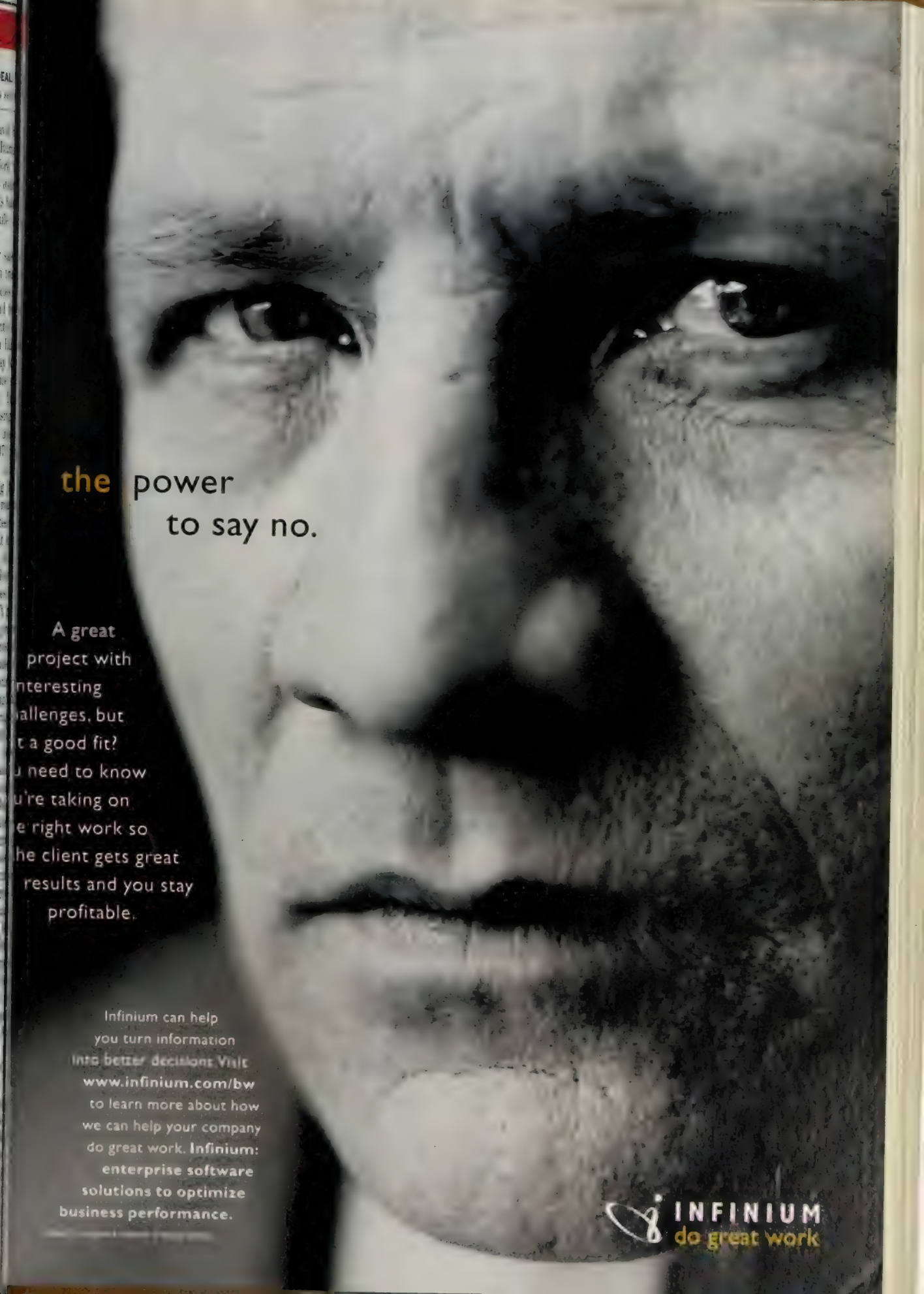
were up, but execs and analysts saw unsettling trends. Ford's bread-and-butter pickup trucks were off 13%—a decline too big to be explained by the comparison with last year, when Ford was selling against a strike-idled General Motors Corp. And foreign brands had made big gains. "If you put all the foreign brands together last month, they were bigger than General

this year. "Are people getting jitters," asks Peter T. Peterson, auto market director at USX Corp.'s U.S. Steel. "Yeah," he says over coffee at the conference. "We're in the midst of that—if it continues—will blow the all-time record for auto sales. I'm saying, 'Pinch me. This can't go on.' **PEAK EXPERIENCE?** They're probably right. For one thing, economists analysts believe recent years' sales fueled at least in part by consumers who freed up cash by refinancing. Now, rising rates could discourage borrowing—for housing or autos. Still, aren't likely to rise enough to depress the market entirely, says Bank of America Corp. chief economist Diane Swonk. She expects auto sales to slow in the quarter to a 16.4-million-unit rate, 16.7 million in the second quarter of 2000, she sees light-vehicle sales slipping to 15.9 million. "It looks to me we are peaking," she says. Things get worse if Federal Reserve Chairman Alan Greenspan tightens more. For far, she says, "he did not hit the ball, he just took his foot off the gas pedal."

Meanwhile, DaimlerChrysler is trying to reverse the ominous spin it added with its earnings announcement. It flew 60 analysts to Detroit for an August meeting and said it might have truck production in the second half when they return from Traverse City. Auto execs everywhere will take up public cheerleading. But if it's forced, there's a reason: "We walk every day and wonder if the downturn is coming," says Ford Vice-Chairman Peter J. Pestillo. Pass the cherry

By Kathleen Kerwin in Traverse City, Mich., with Keith Naughton in Detroit





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do great work



THE GLOBAL ECONOMY

U.S. EXPORTERS GET THE WORD: GUILTY

The WTO rules that billions in tax breaks constitutes a subsidy

Angry over a series of U.S. legal victories before the World Trade Organization, Europeans counter-attacked last year. They picked a 14-year-old provision of the U.S. tax code and called it an illegal export subsidy. Ridiculous! replied Washington. But in a still unreleased decision, a three-judge WTO panel has decided the U.S. tax code does indeed contain a subsidy worth billions of dollars to thousands of U.S. exporters.

The culprit: widely used Foreign Sales Corporations (FSCs), which allow U.S. exporters to set up offshore subsidiaries that act as agents for export sales. The parent corporation may then exempt up to 15% of export earnings from federal income tax. The U.S. is mulling an appeal, but if the finding holds up, the Geneva-based WTO could permit European members to levy penalty tariffs against U.S. exports.

NASTY SURPRISE. The financial implications of the verdict, which caught U.S. trade officials by surprise, are "huge," says Kimberly J. Pinter, an international tax expert at the National Association of Manufacturers. "Everyone is shocked by the ruling." The last time the Internal Revenue Service calculated the size of the tax break, for tax year 1992, U.S. exporters managed to avoid \$2.3 billion in taxes by running \$152 billion in earnings through 3,000 offshore FSCs. The European Union now estimates some 6,000 corporations use the tax break, which could mean the total tax reduc-

tion from the exemption is now worth double what it was seven years ago. "I am delighted," crowed EU Trade Commissioner Sir Leon Brittan. "I call on the U.S. to change its law to comply."

That isn't likely anytime soon. The FSCs help many large U.S. exporters shave their total tax liability by as much as 5%. Boeing Co., the biggest user of the loophole, saved \$130 million in U.S. income taxes in 1998, 12% of its entire earnings that year. Over three years, Boeing's savings amounted to \$319 million, the company reports. Eastman Kodak Co. says it saved \$39 million in 1998, less than 3% of its \$1.4 billion in earnings.

U.S. exporters are nonplussed. Without the FSC, "our taxes would go up, and we would lose our competitive edge," says Kevin G. Conway, a vice-president at United Technologies Corp. UT's exports from the U.S. accounted for 16% of its \$25.7 billion in 1998 revenues.

Stunned U.S. trade officials are now scrambling to interpret 329 pages of WTO legalese, looking for an appeal. "The panel appears to have systematically disregarded the history of this issue, the applicable WTO legal rules concerning income tax measures, and the facts of record before it," says U.S. Trade

PORT OF LOS ANGELES: If the ruling holds up, exports may face tariffs.

Representative Charlene Barshe

The irony is that European nations already enjoy an export subsidy in their tax structure. Governments can receive value-added tax (VAT) on their exports without running afoul of WTO rules. VATs are considered "indirect" taxes, not export subsidies. Indeed, the American FSC was designed, in part, to level the playing field against European port-friendly VAT.

WHAT NEXT? Some U.S. business associations fret that the decision implies that any tax preference in the code may be deemed a subsidy if it benefits exporters. "The broad way the WTO panel interpreted this case to leave you wondering about the intent of the tax code," says Fred F. Murphree, a National Trade Council tax expert.

If the WTO ruling stands, the U.S. could be under enormous pressure to kill or cut a deal with the EU by dropping or reducing successful challenges against European tariffs on U.S.-shipped bananas and a ban on U.S. beef treated with growth hormone. Otherwise, the EU could demand com-

ensation—typically by levying prohibitive 100% tariffs on billions of dollars of U.S. exports. "At that level, the Europeans could kill off U.S. companies or entire industries," says Bruce Reynolds, a partner at Deloitte & Touche tax consultants in Washington. Neither side, including consumers on both continents, could see that as much of a victory.

By Paul Magnusson in Washington with bureau reports

ENTRENCHED
Offshore sales subsidiaries are such an essential tax break that a change in U.S. law is unlikely

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REGULATORS

TAKE ONLY AS DIRECTED (WINK)

A ruling keeps the FDA from halting "off-label" drug uses

For many drugmakers, it was a dream come true. On July 28, the U.S. District Court for the District of Columbia relaxed Food & Drug Administration restrictions on marketing drugs for so-called off-label use. Under the FDA rules, sales representatives were largely forbidden from even telling doctors about uses for a drug that were not yet approved by the agency.

If the ruling survives a likely appeal by the government, which some legal experts expect, drug marketing will be dramatically changed. And while that creates opportunities for drugmakers, it also poses risks. Among them: Drugmakers may open themselves to legal liabilities if they promote unproven uses for a drug that turn out to be harmful. "It increases the market potential," says Dr. Stan Bernard, president of pharmaceutical consulting firm Bernard Associates. "But it also means potential for abuse of your medication by doctors as well as your own sales reps."

Most pharmaceutical companies decline to discuss the ruling. The suit, in fact, was brought by The Washington Legal Foundation, a conservative group seeking to remove limits on commercial free speech. Still, drugmakers are likely to

quickly exploit it. Margaret M. Dotzel, acting associate commissioner for policy at the FDA, says a decision on whether to appeal has not been made.

The FDA has always monitored marketing material to stop companies from promoting unapproved drug uses. But a 1997 law allowed companies to give doctors research from medical journals such as the *New England Journal of Medicine* or textbooks that discussed off-label uses of their drugs. Still, there were stringent conditions, including that the company had to be preparing to apply for formal FDA approval of that

use. The July court ruling found that amounted "to a kind of constitutional blackmail." If the ruling stands, reps will be able to hand out medical journal and textbook material as long as they disclose it relates to an unapproved use.

That would be a double-edged sword. Many life-saving uses are discovered only after doctors experiment. On July 19, for example, *NEJM* released a study showing that combining an older drug called Aldactone with standard medicines for heart failure—an unapproved use—cut deaths by 30%. But aggressive use of drugs in untested ways can also backfire. In the 1980s, certain drugs to treat severe heart arrhythmias were found to be causing thousands of deaths when prescribed for patients with mild rhythm irregularities.

RISKY BIZ. Relaxed FDA oversight poses some tricky decisions for drug-company execs. Those who invested big bucks to get FDA approval for certain uses are likely to feel new marketing pressure from competitors who haven't yet jumped through those regulatory hoops. And they must consider legal risks. A key defense of American Home Products Corp. against lawsuits over alleged harm resulting from the use of unapproved fen-phen diet pills is that it never actively promoted the drug combo. "The FDA prevented you from doing a lot of injury to yourself," says William W. Vodra, an attorney who represents the company in the cases. Drugmakers will have to take care that they don't replace regulatory headaches with self-inflicted ones.

By Amy Barrett in Philadelphia

MARKETING

SOAP OPERA AT WAL-MART

The world's largest retailer goes up against P&G in sud

Why would Wal-Mart Store, the world's largest retailer, jump into the \$4.5 billion laundry detergent market? Certainly, Wal-Mart expects its Sam's American Choice house brand detergent that shows up in stores in late July, to unseat national brands, including Tide. Wal-Mart will get two things it wants: a big private-label product to match those of the grocery chain now competes with, and a bit of age over P&G. With Sam's sudsy arsenal, Wal-Mart can be sure of beating the most favorable deal with P&G.

The Wal-Mart detergent joins a battle for shelf space that has made private labels so popular among retailers. Today, house brands represent 20% of U.S. grocery sales and about 10% of sales at big drug and retail chains. In this war, the ultimate losers are second- and third-tier brands, which increasingly lose shelf space to moderately priced private-label goods.

Robert F. Corcoran, Wal-Mart's executive vice-president for merchandising, says: "Good brands will prosper. Private-label brands will go by the wayside."

And private-label brands won't go away. Marketing experts expect private-label brands to make up as much as 30% of grocery sales within five years—particularly as the competition continues to grow.

aisle Battle: Tide has some competition. The top 10 private-label brands now control 50% of the market. "The top 10 private-label brands here we come," says Chris Hoyt, president of Hoyt & Co., a Stamford, Conn. marketing consulting firm. A consumer product giant such as P&G might feel the pain less than others, but it faces more pressure to keep costs and innovation high.

By Peter Galuszka in Cleveland
Wendy Zellner in Dallas



BY MARK FRANKEL

IS NEW "SAM" CHIP

AMERICA'S NEW ADVANCED MICRO DEVICES is set to unveil a microprocessor that could make a big splash for the company. The rollout of the Athlon signals AMD's push to go to pricier, more profitable PCs selling for \$1,300 and up. Until now, AMD's K6 chip has been relegated to cheap PCs. So, despite record unit shipments, sales suffered as rival Intel pushed down prices to new lows. AMD says the new chip runs 5% to 40% faster than Intel's Pentium III but costs about 25% less. "It's a new chip," crowds AMD's "Jerry" Sanders III. "We're one of PC makers, including Compaq, have

signed on to use the chip in PCs that will hit the market in September.

DOES WWF HAVE A LOCK ON THIS IPO?

WOULDN'T YOU WANT TO ATTEND these shareholder meetings? The World Wrestling Federation, which made Stone Cold Steve Austin and Hulk Hogan household names (at least in some quarters), is going public. On Aug. 3, Stamford (Conn.)-based WWF said it hopes to raise \$172.5 million by selling a minority stake. The entertainment company, which earned \$56 million last year, draws big crowds to its campy shows; last year it beamed its pay-per-view mayhem into 5 million households. IPOs of pro sports franchises haven't scored lately, but given pro wrestling's popularity, "I'd be surprised if this didn't do better," says Linda Killian, a Renaissance Capital analyst.

HUMANA HAS LOST ITS HEAD—AGAIN

ANYBODY OUT THERE WANT to run struggling health-care provider Humana? The post is open again, less than two years after Gregory Wolf, 42, took over as CEO from Humana founder David Jones. Wolf resigned on Aug. 3, a few days after the Louisville company posted a 46% drop in second-quarter profits, its second bad quarter in a row. So far this year, Humana, which had revenues of \$9.6 billion last year, has seen its stock slip 42%. Jones has been called back to help replace his replacement.

PHONE COMPANIES MAKE NICE

LONG-DISTANCE CARRIERS AND local phone companies finally have settled one of the stick-

HEADLINER: RICHARD PARSONS

THREE HEADS ARE BETTER THAN TWO

The Ted & Jerry Show is now the Ted, Jerry, & Dick Show. Time Warner President Richard Parsons has been given operating responsibility for the Warner Bros. movie studio and music divisions. It's a big shift for the former bank CEO, who joined Time Warner in 1995 from Dime Savings Bank of New York. Parsons, 51, works closely with Chairman and CEO Gerald Levin, but until now he had no operating duties, instead serving as negotiator and troubleshooter. His anointment came as Barry Meyer was made Warner Bros. studio chief,

after the departures of co-chairmen Robert Daly and Terry Semel. Meyer will report to Parsons.



Parsons' new duties include making sure that all Time Warner businesses get along at the corporate level. That should be stimulating, since publishing and cable units report to Levin, while Turner Broadcasting Systems and HBO remain under Vice-Chairman Ted Turner. If all goes smoothly, Parsons could follow Levin, 59, in the chairman's job. "It's a complex company," says Parsons. Even at the top.

By Richard Siklos

USING BELL

AIRBORNE

Jumping along near its peak low, US Airways sud- took flight on Aug. 2, 3% to 38%. The takeoff after Tiger Management, the fund with 22.4% of US Airways' stock, signaled its intent to put the shares at a new altitude. In an SEC filing, Tiger head Julian Ross Jr. said he plans to meet with airline execs to discuss a possible share repurchase. That, investors contend, opens the way to a sale. US Airways' stock rose 35% on Aug. 4.



iest regulatory issues dividing the industry. On Aug. 2, six companies—AT&T, Sprint, Bell Atlantic, BellSouth, SBC Communications, and GTE—unveiled a plan to cut the so-called access charges that long-distance carriers pay local phone companies to complete calls to homes and businesses. Under the plan, local carriers would cut their fees by \$5.6 billion a year and collect access charges directly from customers rather than from long-distance carriers, at a top flat rate of \$5.50 a month. Consumers would not wind up paying more, they say, because long-distance carriers will lower their rates.

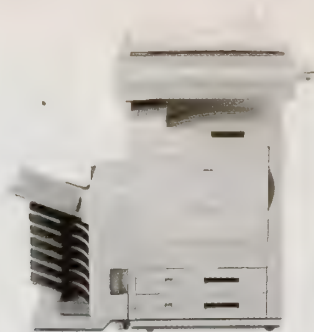
NO DEBATING THIS SURPLUS PLAN

UNCLE SAM IS FINALLY GOING to pay back some of what he owes—in cash. The U.S. Treasury Dept. announced on Aug. 4 that it will use some

of the federal budget surplus to retire part of the government's \$3.6 trillion in outstanding debt. Treasury officials said they hope to have the debt-buyback plan in place by early next year, regardless of the outcome of congressional debate over what to do with the projected federal budget surplus. At the same time, the Treasury will reduce the frequency and size of sales of its 30-year bonds, from thrice to twice annually.

ET CETERA...

- Sun Microsystems will sell a new processor to run Java software in non-PC devices.
- Tom Bell Jr. will become CEO of ad agency Young & Rubicam on Jan. 1.
- Troubled Waste Management may revise its first-quarter results downward.
- National Semiconductor got \$167 million for Cyrix from VIA Technologies.



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BY PAULA DWYER

THE SURPLUS: IS CLINTON PEDDING THE NEW DEMOCRATS?

ling into a chair in his Capitol Hill office on Aug. 3, Senator John B. Breaux (D-La.) seems unusually subdued. As a leader of the Hill's moderate New Democrats, the center of efforts to forge bipartisan compromises, h Republicans and Democrats headed for bitter show-over tax cuts and spending bills, even this instinctive er is glum.

in Washington would people not be able to figure out do with a trillion-dollar surplus," Breaux sighs. "A lot le are going to say, 'Those jokers can't

his colleagues seem more interested in g lines in the sand for the next election, still dreams of a grand surplus com-e. Key elements: legislation to shore up dicare system; a \$500 billion tax cut plits the differences between the De-\$290 billion target and the GOP's \$792 ill; and extra money for a broad range estic and defense programs, from edu-to farm aid.

e's just one problem: Every step of the reaux finds himself at odds with his omocrat buddy, Bill Clinton. At first the two consensus-seeking Southern tes seem to be political soul mates. In-ne Breaux-Clinton friendship dates back ades. Breaux even succeeded Clinton as 'the centrist Democratic Leadership Council.

HCARE FLAP. But these days, their interests are di-g. The Prez wants vivid campaign issues to help rats in 2000. Breaux wants legislation. "The Presi- under pressure to polarize issues rather than get done," says Will Marshall, president of the Progressive Institute, a New Democratic think tank. sparks flew first over health-care reform. As co-chair edicare reform commission, Breaux last winter crafted

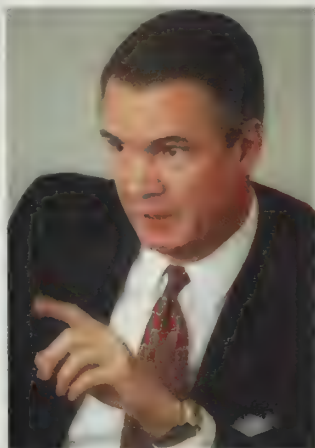
a bipartisan plan for restructuring the troubled program. But just as the panel was set to vote, the White House torpedooed his effort. That's because Breaux's blueprint would have encouraged Medicare recipients to shift to private plans and lacked a politically appealing, broad new drug benefit—making it unacceptable to liberals.

Now, Breaux and Clinton are dueling over taxes. Last month, Breaux and Senator John H. Chafee (R-R.I.) got a dozen moderate Democrats and Republicans to back a down-sized \$500 billion tax cut. White House aides killed the initiative by promising a veto for what they branded a budget-busting proposal. Merely splitting the differences on tax cuts is "a ridiculous place to be," says Budget Director Jack Lew. Translation: Clinton isn't ready to deal yet. First, he wants to veto the GOP's "risky" bill, then he'll haggle in the fall over tax-and-spending trade-offs.

So far, Breaux doesn't have a lot to show for his let-us-reason-together strategy. "He's positioned himself beautifully," notes one top Senate Democratic aide, "but he just hasn't been able to deliver." Still, Breaux isn't giving up. He talks with Clinton on a regular basis. He has good pipes to another old pal, Senate Majority leader Trent Lott (R-Miss). And he continues to work with a shifting coalition of about two dozen moderate Democrat and Republican sen-ators, all of whom want to make policy, not war.

For now, the tax-and-spending debate is at a stalemate. Both Clinton and the GOP are playing two games simultaneously. The first is maneuvering for advantage in the coming budget showdown. The second is gathering ammunition for the 2000 elections. Still, Breaux the dealmaker thinks the odds are 50-50 that there will be an October surprise: a third way on tax cuts and Medicare.

By Howard Gleckman



BREAUX: *Dueling with Bill*

CAPITAL WRAPUP

IN AND TAXES

ause arcane rules prevent Con-from adopting tax measures that in a revenue loss 10 years after ge, the bulk of the tax bill agreed Republicans on Aug. 3 would ex-fter 2009. Capital-gains rates would gain, and the hated alternative-min-tax would reappear. Wealthy el-people would really need to watch backs. The bill phases out the es-ax as of 2009. But once the law ex-in 2010, estates would again be et to taxes of up to 55%.

DEMS TO BIZ: WE WANT YOU

► In a bid to wring more dollars from Corporate America, the Democratic Congressional Campaign Committee, the political arm of House Democrats, is pitching executives on a new busi-ness forum. In return for a \$10,000 do-nation, executives can participate in conference calls and monthly meetings with leading House Democrats. The for-um is headed by Representative Ellen O. Tauscher (D-Calif.), who spent 14 years on Wall Street and has close ties to Silicon Valley.

GRAMM AWAITS FED NOMINEE

► The White House is set to name Carol J. Parry, a former Chase Man-hattan Bank official, to one of two va-cant Federal Reserve Board seats. At Chase, Parry oversaw low-income lending and was considered a leading expert on the Community Reinvest-ment Act, that's the same law that Senate Banking Chairman Phil Gramm (R-Tex.) wants to drastically scale back but that President Clinton hopes to preserve. And it's Gramm's panel that must confirm Parry.



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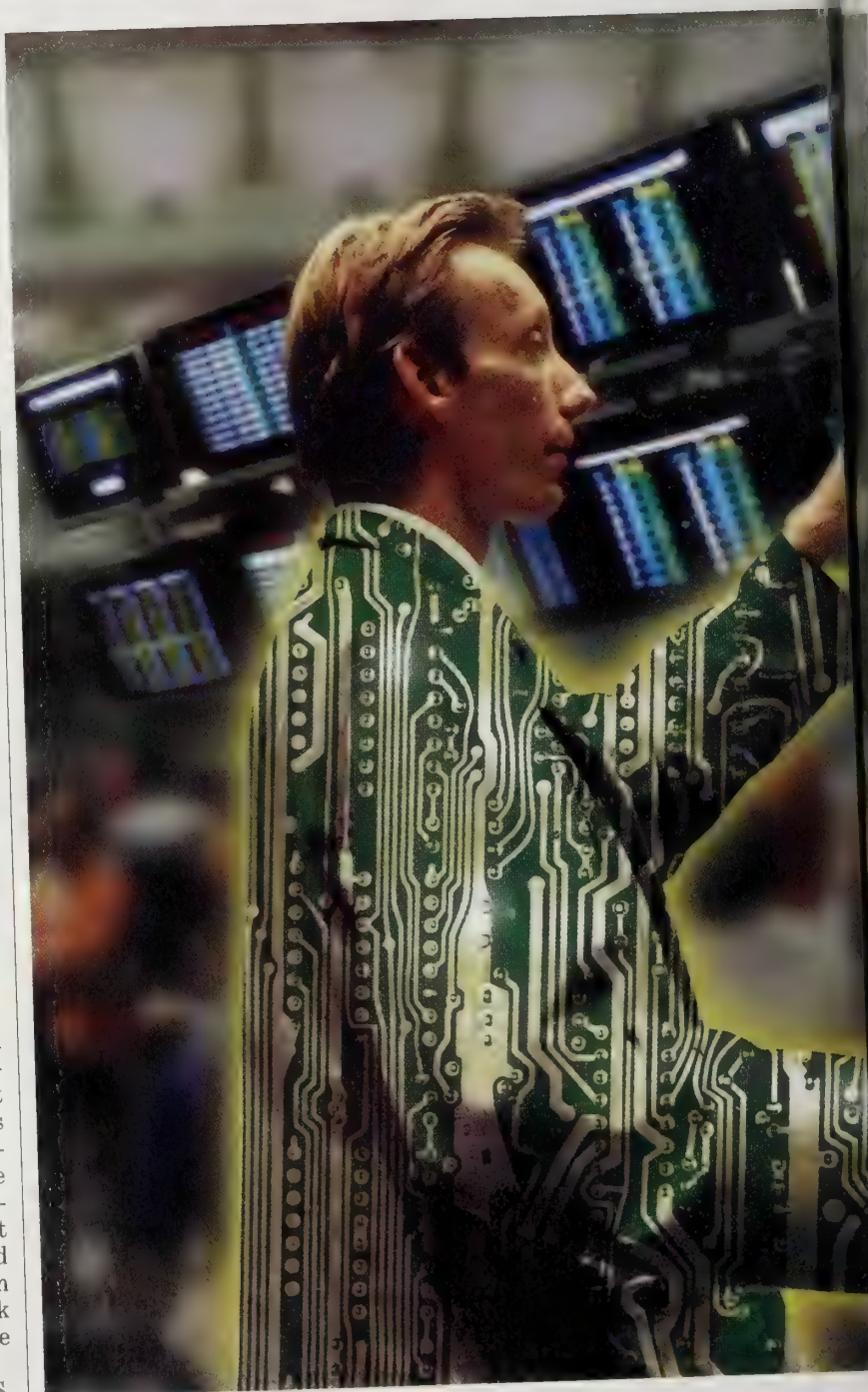
BOURSE BUSTERS

Europe's big traders want a unified system. Who'll provide it?

The explosion of Internet trading and other new investment vehicles has rocked America's most powerful financial institutions, including the New York Stock Exchange and Nasdaq. Now, Europe is beginning to feel the tremors. On July 30, the London Stock Exchange said it would scrap its nearly two-centuries-old, member-owned structure. It will become a profit-making, shareholder-owned company that could eventually go public. The LSE wants more flexibility to maneuver than its current arrangement, with 294 owners, allows. "We are facing increasing competition between exchanges, and new systems are coming in to try to take business away," says the LSE's chief executive, Gavin Casey.

Europe's biggest financial institutions are worried that their traditional turf could be in for an earthquake. Powerful players are pushing for a unified system for trading stocks to cut costs and open the way for more sophisticated products. If the traditional exchanges in London, Frankfurt, and Paris don't provide it, someone else will. Heavyweight investment banks and fund managers are already investing in alternative exchanges and other vehicles. "People like us are making a number of investments because the end result is not clear," says Ronald R. Dewhurst, head of European equities at J.P. Morgan in London. "But if that prods the stock exchanges into action, that would be good."

LOWER COSTS. At the same time, U.S. Internet brokerages such as Charles Schwab & Co. and E*Trade are setting up shop in Europe. And they are joining local players such as Barclays



Bankers are already building alterna

brokers in Britain or Comstock in Germany in attracting investors with cut-rate services. It is scary for established players, who face big losses in market share if they can't get the new business models. But it means that investors—institutional and retail—will likely reap the benefits of lower costs and user-friendly systems. That should help expand trading volumes and promote an equity culture in Europe, which substantially lags behind the U.S. in market capitalization.

But to grow fast, Europe needs to straighten out its snarled financial infrastructure. A year ago, the LSE and Deutsche Börse, which runs the Frankfurt exchange, announced a merger that seemed to herald a consolidation of all the European exchanges. Though the exchanges deny their alliance is in trouble, market participants say progress has been slow on finding ways to eliminate costly and cumbersome differences in trading systems, settlements, and regulation. "They have agreed on opening hours; that is about it," says one senior London banker.

So while the exchanges talk, the bankers are building alternatives. Several firms, including J.P. Morgan, Morgan Stanley Dean Witter, and Warburg Dillon Read have joined together to rescue Tradepoint, a struggling electronic exchange on the fringes of London's Covent Garden, from near bankruptcy. Tradepoint's largest shareholder, following a \$22 million recapitalization, is Instinet Corp., the Reuters subsidiary that is the biggest of the U.S.-based electronic crossing networks that

have grabbed such a big share in trading Nasdaq stocks.

Founded in 1995 as a pioneering alternative to the LSE, Tradepoint never attracted enough action to make money. But Tradepoint's new owners plan to send enough business its way to make the company profitable. Tradepoint CEO Richard Kilsby says the new owners also plan to use it as a vehicle for introducing to Europe hot new products such as trading in market-baskets of stocks, which have been a big success in the U.S.

Some of the same big players also participated in a recent \$24 million new funding for Easdaq, a Brussels-based would-be Nasdaq that now lists some 49 high-tech companies. Tradepoint itself has become an owner. Easdaq is building a new electronic system that will allow it to not only trade European tech stocks but Israeli and U.S. listings as well. With Tradepoint specializing in big-cap stocks, these two exchanges could eventually form the core of a new Internet-capable, shareholder-owned, European exchange that might eclipse or even absorb London, Frankfurt, and the others. "The old established players are going to be swept away by an onslaught of technology players," says Clive Pedder, Easdaq's director of marketing.

ENOUGH FLOW? The investment banks' clients, too, are becoming more creative in using technology. A group of about 20 mostly London-based fund managers, prime clients of the banks, are putting together a trading system that will cut brokerage costs by matching trades of big blocks of shares amongst themselves. Nigel Foster, a Merrill Lynch Mercury Asset Management executive who will head the new venture, called E-Crossnet, says that participants will be able to trade at a cost of about 0.10% of the transaction's value, down from the current average of about 0.60%. That would cut the cost of a \$1 million trade from \$6,000 to \$1,000. "This is a

NEW THREATS TO OLD EXCHANGES

► More than 20 European fund managers, led by Merrill Lynch Mercury Asset Management and Barclays Global Investors, are building their own system, called E-Crossnet, which will reduce the brokers' role.

► New investors, including the big investment banks—Goldman Sachs, Morgan Stanley Dean Witter, J.P. Morgan, and Warburg Dillon Read—are revving up alternative electronic exchanges, Easdaq and Tradepoint.

► Online brokers, including Charles Schwab and E*Trade of the U.S. and Barclays Stockbrokers, are setting up shop in Europe, cutting flat commissions.

DATA BUSINESS WEEK

good example of how fees that previously went to a middleman can be saved by investors," says Peter A. Murray, CEO of Railways Pension Trustee Co., which manages more than \$20 billion for British retirees.

Some veterans are skeptical. Tradepoint and Easdaq haven't made much of a mark in several years of operation. E-based systems may be cheap to operate, but the big question is whether they will attract the massive flows necessary to achieve efficient pricing. Europe already has a problem of big orders swinging stock prices. "In trading, the cost is not so much the commission but how much you move the price of the stock," says Robert A. Metzler, vice-chairman of Morgan Stanley in London. "That is why liquidity is so important."

The key to building liquidity may not be alternative exchanges but new and lower-cost providers to lure in retail investors, who have traditionally been a small part of the European markets. E*Trade, the big U.S. online broker, has just entered the British market, joining Charles Schwab, which is beginning to catch fire a year and a half after launching its online service. Schwab says it is signing up 2,000 clients a week. Such firms offer flat-fee trades for as low as \$25, while traditional brokers charge as much as 1.25% per trade. In a recent study, J.P. Morgan predicts that online account holders in Europe will soar from 400,000 at the end of 1998 to almost 2.5 million by the end of next year.

But Julian Costley, chief executive of E*Trade U.K., acknowledges that E*Trade and other online brokers have "a really tough task" in establishing themselves with European investors. So do all the players in Europe. The situation is messy, and it is far from clear who the winners and losers will be. But there is plenty of opportunity.

By Stanley Reed in London

an electronic exchange to a would-be Nasdaq

VIETNAM

WELCOME BACK?

A trade deal could boost U.S. investment in Vietnam



SLOW GOING: Many U.S. companies are leery of Hanoi, so they probably won't stampede in

A huge, untapped market. Millions of diligent, low-wage workers. A government that promises the moon. Enthusiastic foreign investors heard it all before from Vietnam, in the early 1990s—only to become gravely disillusioned by corruption, red tape, and obstinate communist bureaucrats. As such multinationals as Raytheon, Chrysler, and Sheraton Hotels pulled out, investment plunged, and growth stalled.

Now, chastened officials are relaunching the charm offensive—and this time, the gains could be lasting. On July 25, Washington and Hanoi announced an agreement in principle that would give U.S. companies greater market access. Banks, insurance companies, law firms, and retailers would be able to operate freely in Vietnam, while telecom companies would be permitted to own limited stakes in local ventures. Vietnam also pledged to dismantle tariff barriers on hundreds of U.S. goods.

BARRIERS. In return, Hanoi will get what it has long craved: Normal trade status with the U.S. that will open the doors to Vietnamese-made shoes, garments, and other products. Even though Washington ended its economic embargo in 1994, high tariff barriers kept Vietnamese exports to the U.S. at only \$550 million in 1998. With the deal, Vietnamese exports could double next year.

U.S. officials are hailing it as one of the most comprehensive bilateral trade pacts they've ever reached. Negotiators hope to wrap up in time for President Bill Clinton and Vietnamese Prime Minister Phan Van Khai to sign the deal in New Zealand at September's Asia-Pa-

cific Economic Cooperation summit. Congress and Vietnam's National Assembly then must approve. With luck, it could go into effect as early as January.

Still, don't expect another corporate stampede into Vietnam immediately. Just in the past few months, Motorola, Qualcomm, and Cigna have sharply retrenched because they grew tired of losing money. Permission to own just 20% to 30% of a venture sometime in the future, as provided in the pact, may not be enough to lure them back.

But excitement is building in some sectors. U.S. banks, now allowed only limited operations, are bullish. Eventually they are to get the same rights as domestic institutions to make loans and offer financial services. "Long term, we're looking at having full, unrestricted access to the market," says Citibank country manager Bradley C. LaLonde.

Companies using Vietnam as an export base also are elated. Take Nike Inc. Through its Taiwanese and Korean subcontractors, Nike is the largest foreign employer in Vietnam, with 43,000 workers. A dozen factories produce \$400 million in shoes and garments yearly—5% of Vietnam's total exports—for Europe and Asia. Few go to the U.S. because of tariffs averaging 30%. Now, one Nike shoe factory in the southern district of Cu Chi plans to boost its workforce by 50%, to 9,000.

By shifting to Vietnam, wages are a month, Nike hopes to lessen its reliance on China and India. "We're a winner ultimately," says Vietnam manager Chris Helzer.

Economic problems are behind Hanoi's haste to make a deal. The Asia crisis caused investment from companies beset by recession-ridden Hong Kong, Singapore, and South Korea to plunge. Foreign investment applications fell from a peak of \$9.2 billion in 1997 to \$4.1 billion last year. Just \$1 billion

was expected in 1999. That, in turn, has hampered Vietnam's economy, which is growing at only half its pre-crisis rate of 9%.

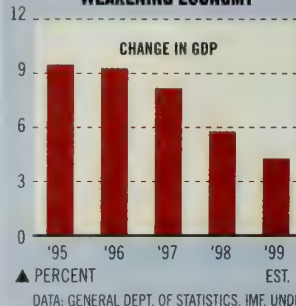
OPPORTUNITY. The U.S. trade pact could add momentum to economic reform. In the early 1990s, the government made bold promises to reduce the sector and liberalize the financial system. But bureaucrats stalled, most reformers fled. As a result, only one-third of Vietnam's 5,800 state enterprises are profitable. The pact is posing the companies to foreign competition could force them to modernize.

Hanoi also hopes for greater U.S. exports, which will create jobs. The Labor Ministry forecasts that by next year, 1 million people—20% of the workforce—could be employed. And 1.3 million join the workforce each year. "We have to find a way to employ them," says Indonesian Vice-Minister Ng Xuan Chuan. "Once the U.S. market is open,

there is a big opportunity for us." For many battle-scarred foreigners, this latest round of openness in Vietnam may be too little, too late. To those companies, Hanoi offers contrition. Says one of the VCCI: "It would be easy to blame the Asia crisis, but we blame ourselves. The government realizes the fact." Vietnam is looking for a second chance. It certainly needs it.

By Sheri Prasso in Hanoi, with Magnusson in Washington

VIETNAM'S WOES WEAKENING ECONOMY





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COMMENTARY

By Mark L. Clifford

DAEWOO'S BOSS IS PLAYING A DANGEROUS GAME

For months now, Kim Woo Choong has been fending off pressure by creditors and the government to drastically downsize his Daewoo Group as it threatens to collapse under some \$50 billion in debt. The maverick 63-year-old founder of South Korea's second-largest *chaebol* even promised to relinquish control and sell his personal assets. But as Korean markets wobble and foreign banks grow edgier, so far the only ones who are forfeiting anything of value are taxpayers and Daewoo's lenders, who have been forced to pump in billions in fresh credit.

How much longer can Kim keep up his high-wire act? Short of radical state action, such as nationalizing the conglomerate, quite a while. The truth is, Kim is holding immense—and dangerous—leverage. He knows well that a Daewoo collapse could be one of the biggest and messiest corporate bankruptcies ever. In Korea, it could be enough to derail the fledgling recovery, reignite the financial crisis, and imperil the ruling party's chances in upcoming parliamentary elections. Daewoo has 100,000 employees in Korea, a massive supplier network, and creditors that include trust companies that hold nearly \$18 billion in junk bonds.

The impact would be felt globally as well: Daewoo creditors include some 140 banks in more than 100 countries. In short, Kim is holding Korea Inc. and its financiers hostage. Little surprise, then, that despite repeated campaigns to rein in the big *chaebol*, Seoul doesn't want to do anything precipitous. Meanwhile, given Korea's slow-moving bankruptcy procedures, few creditors want to see their claims sorted out in court.

The only way to resolve the Daewoo crisis is install new management that's serious about profitability. So

long as Kim is entrusted with the urgent task of restructuring Daewoo, little will be achieved. For when it comes to using leverage and public relations gimmicks to avoid real reform, Kim is an old pro.

For decades, Daewoo has been known for exorbitant borrowing, over-expansion, and cash flow problems. Koreans have long joked that Daewoo

makers, despite Daewoo's reputation for poor quality. Even when Korea's financial system melted down in 1997, Kim kept expanding.

Daewoo's strategy during its most recent crisis is right out of the old playbook. In April, Kim said he would revamp the group by selling a shipyard, hotels, electronics, and other businesses. Except for an agreement

to sell a Seoul hotel, little has happened so far. One reason is Kim's asking price for assets. Investment bankers say he wants \$4 billion for the shipyard, even though a more modern one owned by failed Halla Group can't find buyers at \$1 billion.

In late July, Daewoo disclosed it could not meet its debt payments. Local creditors had no choice but to roll over loans and hand over more money. On Aug. 3, Kim unveiled yet another restructuring plan. Typically vague, it was promptly rejected by banks. Daewoo is now talking to foreign banks one-on-one. Says a Western banker in Seoul: "We're worried that they're cutting deals" with individual banks. Remarkably, Kim is still driving the talks on his own terms.

There's no denying that Kim and his unremitting drive have done amazing things.

Most Koreans want to believe that this time, he will fix Daewoo for good. But he hasn't been able to grapple for decades with changes in the global economy that have made his borrow-and-build mentality obsolete. He's unlikely to do so now. It's time to break up Daewoo and sell its pieces to someone who can run them profitably.

Clifford is Asia regional editor for BUSINESS WEEK.



is like a bicycle rider: If it doesn't keep peddling fast, it will fall over. During a financial crunch in the mid-1980s, Kim vowed to donate all his wealth to a charity and step down when Daewoo stabilized. Then, too, he declared he would cut the group's far-flung holdings to a few core businesses.

He made similar pledges in 1989, when Daewoo's shipbuilding unit, the world's second largest, ran aground. A government bailout saved Daewoo. Kim stayed in charge, only to embark on yet another borrowing binge. Auto factories in Uzbekistan, India, and Poland were part of a mad dash to become one of the world's largest auto

POLISHING UP
Kim is a past master at using public-relations gimmicks to avoid real reform



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BY CHRISTOPHER POWER

GERMANY: CAN SCHRODER DRAG HIS PARTY DOWN THE ROAD TO REFORM?

German Chancellor Gerhard Schröder, like most of his countrymen, is enjoying his summer holiday. But for the Socialist leader's enemies, there is no rest. In late Saarland Prime Minister Reinhard Klimmt published a long letter in *Stern* magazine, accusing Schröder of betraying the ideals of the Social Democratic Party (SPD).

The letter was a call to arms for Schröder's opponents, who are alarmed by his persistent efforts to overhaul the welfare state. The episode also is a signal that he is in for a hot autumn as he tries to push through a cost-cutting budget and lead his divided party to victory in the upcoming elections. How the reform-minded Schröder performs in the next few months will determine how much change he can accomplish off. "It's a struggle for the future of the country," says Stefanie Wahl, political analyst at the Institute for Economic & Social Research in Bonn.

It has been a year of bloodletting for the Chancellor. He started his term in a constant battle with his radical left Finance Minister Oskar Lafontaine. When "Oskar the Red" finally resigned in April, he replaced him with Hans Eichel, who has the backbone to carry out spending cuts. He also replaced his personal chief of staff, Bodo Hombach, with technocrat Frank-Walter Steinmeier. And he is pushing to have his trusted campaign manager, Franz Müntefering, join the top echelon of the SPD at the party congress in December, which would help him fend off party manager Ottmar Schreiner, a Lafontaine ally.

Now, Schröder's centrist policies are about to face a first test. In September, he must rally the troops to pass an ambitious plan to slash \$16 billion from the budget. He also faces state elections from Sept. 5 through Oct. 10. If they go badly, the party will lose its majority in the Bundesrat, the

upper house of parliament. Moreover, Lafontaine could stir up trouble on Oct. 12, when he publishes memoirs explaining why he resigned.

So far, Schröder has played his hand adroitly in pushing his budget plan, which is the boldest set of cost-cutting measures proposed in Germany for some time. To build support and avoid the appearance of favoritism, he has asked every ministry to accept a 7.4% cut, even in such areas as health and defense.



SCHRODER: Budget cuts

COUNTERATTACK. Schröder is gathering a hard core of followers. He is placing a cadre of youthful SPD members in influential positions. Surprisingly, Schröder is rallying support from his coalition partner, the Greens. Once a ragged collection of special interest groups, they are proving to be pragmatic about finances. "We are the guards to protect the spending cuts," says Matthias Berninger, a Green member of parliament and the budget committee.

The Chancellor's supporters are also launching a counterattack. The self-serving Klimmt, they explain, faces elections on Sept. 5 and just wants to hold on to ruinous coal subsidies for Saarland. "This is not a battle over the soul of the party," scoffs Peter Struck, head of the SPD faction in the Bundestag. "We still support the principle of social justice, but that no longer means just giving money away."

Rivals can still derail Schröder's efforts. The budget will probably pass, but the left wing will try mightily to water down the cuts. If Schröder cannot carry through his budget, the momentum for reform will disappear before he can move on to his plan to dramatically cut taxes in 2001. Even then, it's unclear if the Chancellor has the stomach for a radical remake of the welfare state. But he seems set on his direction—to the elusive center.

By Karen Lowry Miller in Frankfurt

GLOBAL WRAPUP

RUSSIA'S NEW PARTY

Moscow Mayor Yuri Luzhkov has led an alliance with Russia's leading regional party, forming a power expected to sweep December's parliamentary elections. The new parallel Fatherland-All Russia, says presents the wide "patriotic center" of Russian voters fed up with incumbent Boris Yeltsin's eight-year regime and with no desire to return to the country's communist past. Luzhkov has asked Russia's most popular politician, former Prime Minister

Yevgeny Primakov, to head the new party. With Primakov on board, Fatherland-All Russia could win a clear majority in parliament. But former spymaster Primakov, who is recuperating from back surgery, has stayed mum so far.

PROGRESS IN INDONESIA

► Indonesian President B. J. Habibie declared the results of the June 7 elections valid on Aug. 3. The unexpected move defused a political crisis caused by the refusal of a government election commission to sign off on the

results. Habibie's ruling Golkar party had won only 22% of the vote, while opposition leader Megawati Sukarnoputri's Indonesian Democratic Party-Struggle got 34%. Habibie's decision followed a show of support for Megawati by the armed forces commander-in-chief, General Wiranto. The way is now clear for the People's Consultative Assembly, which combines Indonesia's parliament and electoral college, to meet in October to elect a new President and Vice-President. Megawati and Wiranto are the front-runners for those posts.

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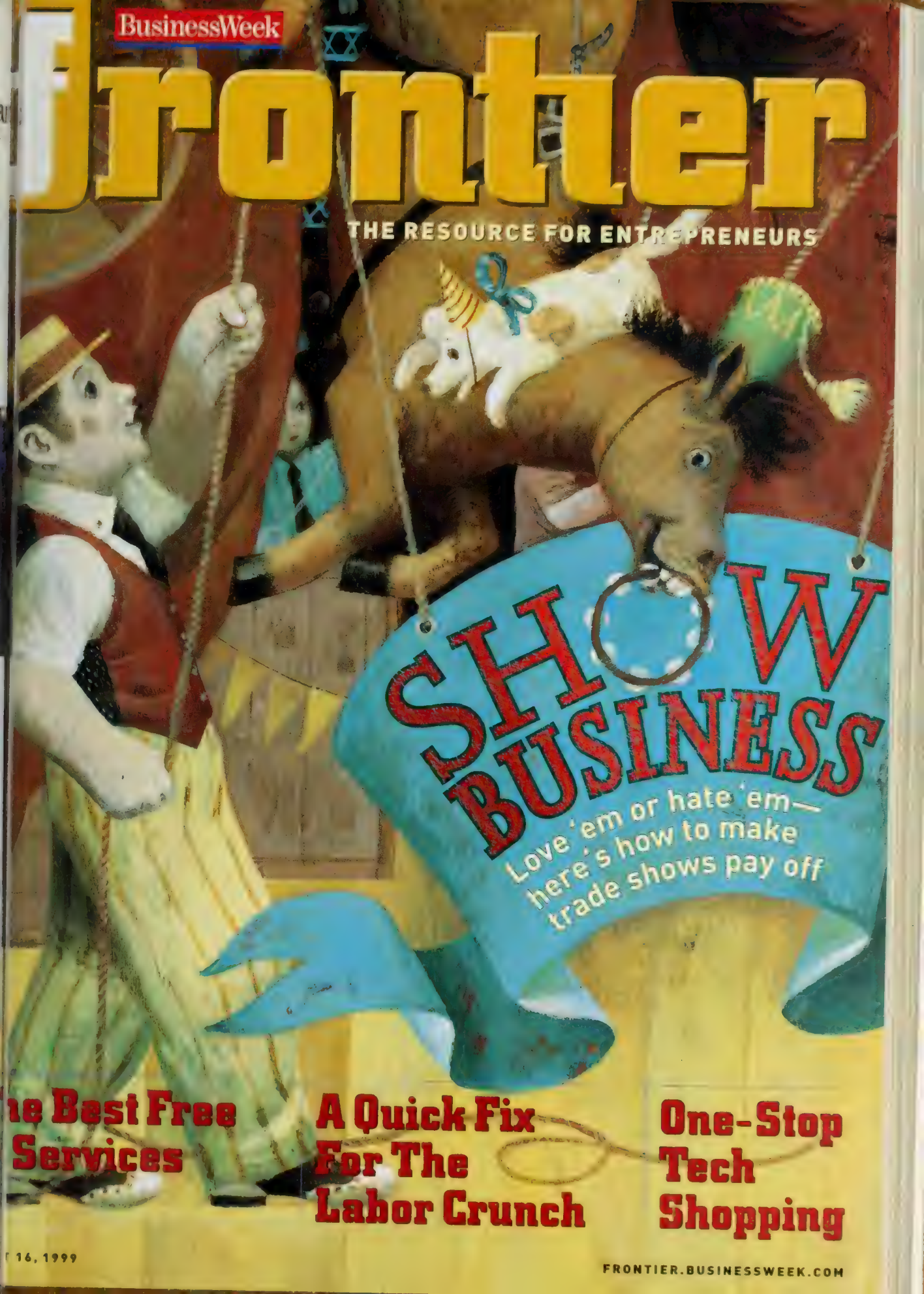
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Contents

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F.20 Trade Secrets

There's no better place to strut your stuff than at a trade show. But to get the biggest bang for your buck, you'll have to do plenty of planning



F.20

F.32 One-Stop Tech Shopping?

The dream is to get all your tech needs with one phone call. How close do vendors come?

F.36 Making a Bundle

OneCore provides an all-in-one online service, from banking to investing. But Merrill Lynch and Net banks are sure to be stiff competition



F.26 Show and Sell

At a vast trade show for architects and engineers, a vet and a newbie pitch goods, schmooze the prospects, and pass out freebies



Departments

F.4 InBox

Computer rage, taking the office on vacation, loans for minority business, and more

F.8 Trends

With labor so scarce, some owners are just giving up the chase. Can you keep growing without hiring? And is the tide about to turn?

F.10 Who's Hot

Like everything else, grassroots lobbying has gone electronic—and these entrepreneurs make a good living at it



F.10

F.12 What Works

A mission statement could be your most critical strategic tool. Get workers' input, give it teeth, and then follow it to the letter

F.14 Talking Heads

Winery heir Robert Mondavi Jr. talks about learning the ropes at his startup, Napa Cigar

F.16 Digital Manager

Those Web freebies look tempting—but something for nothing can still cost you plenty



F.16

F.40 Life & Co.

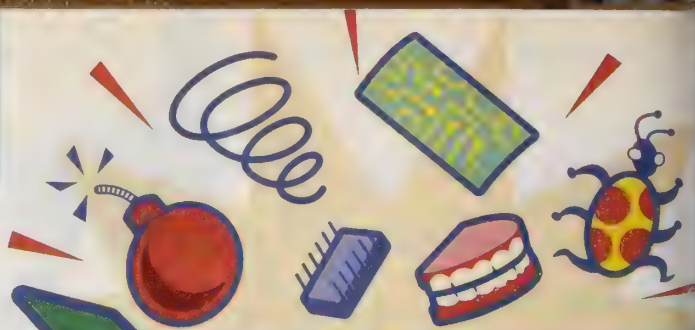
Entrepreneurial camps teach kids to run businesses, not footraces

F.42 Under 30

In Phoenix, a young go-getter turns food delivery into a \$3 million empire

Cover illustration:
Gerard DuBois

EDITED BY DENNIS BERMAN



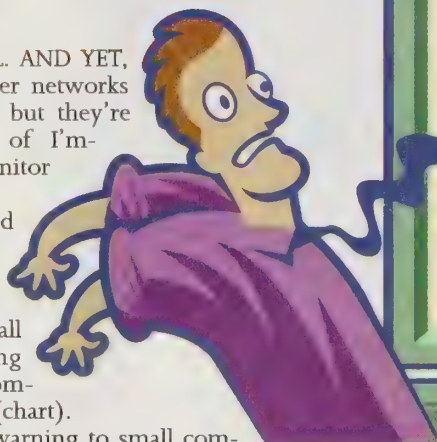
The Downtime Disease

BRILLIANT. HELPFUL. AND YET, incorrigible. Computer networks can do great things, but they're still prone to periods of I'm-gonna-smash-the-monitor downtime.

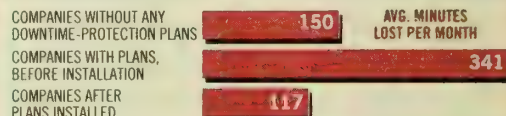
If you've ever had that urge, you're not alone. New research from International Data Corp. shows small companies grappling with an array of computer-system snafus (chart).

That should be a warning to small companies hoping to computerize additional aspects of their operations. As IDC's Carey Azzara points out, the best systems are built from the bottom up and take future expansion into account. Unfortunately, the piecemeal systems often built at small companies "were never designed well in the first place," he says, and are prone to hiccups.

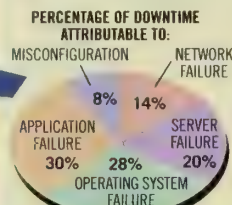
Some companies are finding relief with pricey "systems management" tools that create redundant—and presumably fail-safe—network circuit-breakers. But even those companies are hit by at least two hours of downtime each week. So monitor rage is likely to be around for a while.



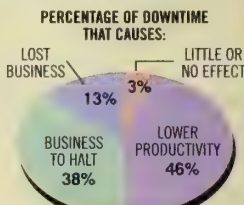
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DATA: INTERNATIONAL DATA COMPANIES, AMONG COMPANIES WITH 1-99 EMPLOYEES

SO THEY SAY

"This is a bunch of grizzled veterans with hoof marks on their backs..."

—BARRY L. STAR, 41, comparing his Net startup, OneCore Financial Network, to those founded by twentysomethings (page F.36).

15.3%

Percentage of small businesses that say a 75¢ hike in the minimum wage will cause layoffs.

ONE IOTA

Legal E-gle

IT WON'T MAKE your lawyer obsolete, but the new Labor Dept. ELaw Web site (www.dol.gov/elaws) provides easy-to-understand background information and electronic checklists on 16 employment-law subjects, from paternity leave to asbestos removal. An interactive tool also helps you select the retirement plan best geared to your company size and employees' wishes.

What Minorities Need No



CHAPPELL

Giving minority entrepreneurs that special chance—a loan—has been a central theme of banker Emma C. Chappell's career. She founded United Bank of Philadelphia in 1992 with \$6 million and raised \$500 at a time from black investors. Some excerpts from front Web site:

Q: What are the chief obstacles confronting black entrepreneurs seeking financing?

A: The biggest is a mindset people have against African Americans having the ability to be entrepreneurs.

Q: Are black entrepreneurs tapping into same rich technology opportunities that white entrepreneurs have?

A: [Not] as much as they should. There is a whole lot of money available for technology business. Usually, African Americans are the last ones to get the opportunity to be exposed to these types of businesses. If they are, they are exposed at such a low level, they very seldom get to the point where they are in management.

Q: Any words of advice to entrepreneurs?

A: So often, minorities have such difficulties finding jobs. But if we had more minority entrepreneurs, then they would create more jobs in their own community.

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The Little Economic Engine that Isn't?

DAVID HIRSCHBERG scoffs at the oft-repeated notion that small business "is the engine of the American economy." For his forthcoming *Job-Generation Controversy: The Economic Myth of Small Business* (M.E. Sharpe, \$48.95), the retired Small Business Administration economist reanalyzed data on job growth. His findings: The SBA has been misleading the public and lawmakers with bad statistics. In particular, its methodology liberally credits small businesses with creating new jobs, but fails to count the ones they lose. The economic-engine theory "has become a mantra for the small-business

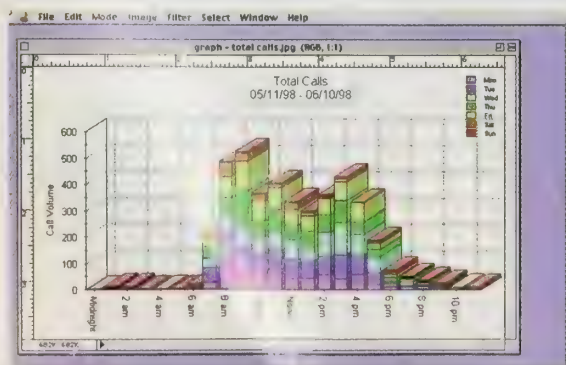
lobby, and it's phony," says Hirschberg. For the first time, the SBA will include data based on Hirschberg's methods in its annual report. But it still prefers its own data, which credit small companies with 77% of new jobs from 1990 through 1995, compared with 57% by Hirschberg's standards. "In either case, the smallest firms are creating more of the jobs," says an SBA spokeswoman.



HIRSCHBERG: When it comes to employment, small business giveth and small business taketh away

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IT'S THE ULTIMATE in tracing calls. New services from U S West and Cincinnati Bell track incoming phone traffic and yield remarkable detail: the number of calls each hour, Zip Codes of origin, and how many callers get busy signals. These services then plot the data on maps and tables delivered by disk or the Web. The payoff: Businesses can determine the effectiveness of local ads and identify peak calling periods when staffing needs are highest. Costs run from \$350 to \$3,000 annually, depending on volume. Contact U S West Call Reports (800 603-6000) or Cincinnati Bell's Call Analysis (513 566-5050).



DIAL TONES: U S West's hour-by-hour call log



Tan and Toil

LOOKS LIKE some business owners will need a vacation from their vacation. While 71% of 276 business owners polled by American Express Co. plan to take a summer break, only 28% said they'll be able to shut out work completely. Of those who can't let go, 38% said they'll keep in touch via cell phone (up from 21% last year), and an additional 13% will schlep pagers or laptops along with their sunscreen. Too bad entrepreneurs don't have a sleep mode setting themselves.

Peace of Mind—Cheap

It's a chilling scenario: Someone breaks into your computer and jacks a confidential E-mail message. It used to be that only government had the tools to outwit computer hackers, but now a lot of low-cost, high-powered encryption software has hit the market. For under \$100, you can buy software (such as Symantec's Your Eyes Only or Network Associates' PGP Personal Privacy) that encrypts designated files on your hard drive or all outgoing E-mail. Many programs work seamlessly with existing computer applications. You'll hardly know they're slogging information, but snoopers

Digging for Data

How does your company's profit margin or head count stack up against those of its peers? Several resources may show you. Of special interest: the 700-page *Factual Studies of the Small Business* (www.fraffsb.com, \$97), which concentrates on companies with annual sales of less than \$1 million and annual revenues of up to \$10 million. Robert Morris Associates publishes an *Annual Statement Study* charting spending patterns and annual revenue in 500 industries (www.rmahq.com, \$129).

Caught in the Middle

Not a fresh startup or an established business—but in between? You may be stuck when trying to find a loan, says a government analysis of 1998 loan data.

The evidence: The number of bank loans under \$100,000 increased nearly 20% year-over-year while the tally of loans between \$100,000 and \$1 million grew less than 2%. Meanwhile, total dollar volume of loans under \$1 million grew only 6.3%, compared with a 13% increase for loans greater than \$1 million.



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'There Is No One to Hire'

Employers have scraped the barrel's bottom. Now what?

NO ONE TALKS about the discouraged worker anymore, those job hunters who simply gave up in past recessions because there was no work to be found. Now, it's the discouraged employer. Small businesses are giving up trying to find qualified workers and scaling back on hiring plans. "Anyone who is any good is already working, and I am convinced we would be getting the dregs," says Charles

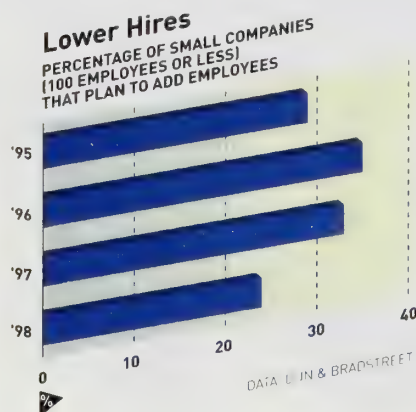
add staff in the next quarter, down four points from November's all-time high. And yet, a record 30% reported unfilled openings this year.

What's behind this dichotomy? Perhaps entrepreneurs like Mott are simply giving up on finding new staff. "It's not weak demand," explains William C. Dunkelberg, the NFB's chief economist. "There is no one to hire." To be sure, some entrepreneurs are holding off on hiring in anticipation of a slowdown. But there's another, more subtle trend: Many companies have revamped or automated to boost productivity and thus avoid the problem of finding qualified workers.

"It's a nightmare," says David L. Birch, president of Cognetics Inc., a Cambridge (Mass.) database company. "We have changed our whole company to deal with the labor problems." Unable to expand the 10-person staff, he has eliminated smaller accounts and automated more office functions. Still, he plans to snap up a few employees when the labor market inevitably loosens. "I can't wait," he says.

He may not have to wait long. Small businesses might find a slightly looser labor market in the coming months if the Fed succeeds in slowing the economy. Indeed, nationwide job creation has fallen from a monthly average of 240,000 in 1998, to 200,000 for the first six months of 1999, says Mark M. Zandi, chief economist for RFA, a consulting firm in West Chester, Pa. Sounds encouraging—so long as the trend doesn't reverse entirely.

—JANIN FRIEND

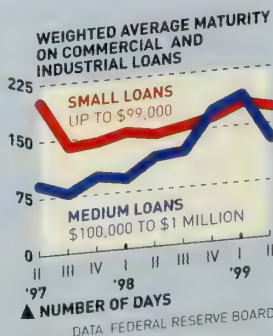


E. Mott, president of Innovative Vacuum Services Inc., a company in Edmonds, Wash., that has decided to grow without increasing its staff of 32.

Attitudes like that are probably skewing surveys that show small-business hiring plans have declined, even as the nation's runaway economic boom is growing stronger. A Dun & Bradstreet Corp. survey conducted in February, for instance, found 29% anticipate adding employees this year, down from 35% in 1998. More recently, the June survey for the National Federation of Independent Business shows a net 16% of small companies plan to

It's Payback Time

How confident are banks feeling about their small-business borrowers? One measure is the "weighted average maturity" of business loans, which charts how long it takes before a loan comes due or the rate is reset. A longer period reflects greater confidence in economic stability—and gives a business more of a breather between potential rate hikes. The second-quarter drop in duration suggests lenders are uneasy about how long the economy can continue its inflation-free growth.



CURRENTS

Well, Duh

Think all your entrepreneurial skills and hard-won wisdom can be packaged and sold to a bunch of dimwits? That's the master plan of IDG Books, which has now shipped over 200,000 *Small Business Dummies* paperbacks aimed at would-be upstarts.

Actually, it takes nine volumes to hold it all, at \$14.99 a copy. But how do you explain simply the minutiae, say, C corporations, to the untutored? *The Small Business Dummies* offers a series of checklists. Or the sticky and often subtle question of keeping key employees? The flagship volume does it in 25 bullet-pointed pages. When it comes to still more complex matters, taxes, accounting, and contracts—the volumes mark chunks of text with a "Technical Stuff" icon. "Feel free to skip the discussions—no one's going to get mad," it chirps. If only the real world were so forgiving.

City Capital

Inner-city businesses have the ideas and the gumption, but many still lack a crucial component: capital. The Small Business Administration hopes to open the spigots with its Neighborhood Markets Initiative, announced last month by President Clinton, which will extend special terms to both lenders and borrowers in low- and moderate-income areas nationwide.

The first such outfit, Phoenix-based Magnet Capital, has already amassed a \$5 million kitty from seven banks, with the SBA kicking in another \$15 million. Magnet will defer interest payments for up to five years, and will take an expanded role helping inexperienced entrepreneurs run their businesses. The program sets out to create 10 to 20 companies in other regions that would take debt and equity stakes in inner-city startups.

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Step Into Our Lobby

Like everything else, political outreach has gone electronic. These two have made a business of it

IN THE SUMMER of 1991, when he was 20, Jonah D. Seiger knocked on doors all over Ann Arbor, Mich., pitching auto insurance reform on behalf of the Michigan Citizens Lobby. He took the job, he recalls, mainly because "it sure beat working at McDonald's." To his surprise, he found political advocacy exciting. Now 28, Seiger is still at it. But instead of going door to door, he helps interest groups do their grassroots lobbying screen to screen. Mind-

Share Software Alliance to Amnesty International USA. One of their hottest clients is the OPENNET Coalition, a group of 200-plus Internet service providers (ISPs) that are battling cable operators and AT&T for the right to offer their services over cable's superfast pipelines. Mindshare designed a Web site for the coalition and generated "join the fight" E-mail letters to ISP customers. More than 35,000 signed up. Mindshare then mobilizes these cyber-supporters when key decisions are pending.

Safdar and Seiger have solid cyberspace credentials and a knack for eye-catching activism. Seiger co-founded the nonprofit Center for Democracy & Technology. Safdar headed a grassroots Net advocacy group while he was a vice-president for information security at Goldman, Sachs & Co. in New York. Since 1994, the pair have collaborated on digital lobbying campaigns in defense of Internet freedom. In 1996, they led the Black Thursday protest against the Communications Decency Act's curbs on Net speech, in which thousands of Web sites, including Yahoo! Inc. and Netscape Communications Corp., went black for 48 hours. Their reputation for politically savvy cyber rabble-rousing made it relatively easy for Seiger and Safdar to attract clients when they launched Mindshare with \$50,000 in savings. They took in \$500,000 in revenue their first year and turned a profit, and expect revenues of at least \$1.5 million this year using a staff of seven, plus a stable of freelance designers. Campaigns cost anywhere from \$20,000 to \$500,000.

Finding people with the right skills in a growing but still specialized field remains the most daunting challenge. And the political Establishment is catching on to the Internet's lobbying potential. For now, though, Seiger and Safdar are still several mouse-clicks ahead of the pack. —AMY BORRUS



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RABBLE-ROUSERS: Seiger and Safdar expect to pull in \$1.5 million this year

share Internet Campaigns, the Washington (D.C.) company he co-founded in December, 1997, develops Internet-based political outreach strategies for companies, trade groups, and nonprofit organizations.

Seiger and co-founder Shabbir J. Safdar, 31, are in the vanguard of the online activism used by candidates and causes to get out the message and mobilize supporters. "As the Net becomes more mainstream," says Seiger, Internet-oriented campaigns "will become as essential as TV, print, or radio."

Mindshare designs Web sites and uses customized online techniques on behalf of a growing roster of clients, now 19-strong, which range from the

INSTANT EXPERT

Conflict Resolution

Dissension is a fact of business. Disagreements between co-workers, clashes with clients, misunderstandings with suppliers. Conflict resolution is a search for a middle ground, where all parties feel they have come out ahead.

Case In Point Jorian Clarke, president of SpectraCom Inc., a Milwaukee-based Internet marketing and research firm, gave employees training in conflict resolution. They used the technique to calmly show a client how her insistence was hurting their ability to complete a project. They also learned to prevent cultural tensions with international clients. For example, by honoring Germans' need for small talk before getting down to work, her team set the stage for a smooth project relationship.

Resources BOOK: *Getting to Yes: Negotiating Agreement Without Giving In*, Second Edition (Penguin, 1991) by Robert Fisher, William Ury, and Bruce Patton. An oldie but goodie. Clear, complete blueprint for principled negotiations that stresses objectivity in handling conflict and encourages innovation and imagination in problem solving.



FREE COUNSELING: The Center for Negotiation and Conflict Resolution at Rutgers University (732 932-2487) offers brief phone consultations for free. **WEB SITES:** American Arbitration Association (www.adr.org). Check out their *Guide to Mediation and Arbitration for Business People*. Unlike other highly theoretical sites, this one is full of hands-on information and pragmatic advice. For print copies, call 1-800-778-7879.

—ALISON STEIN WELLN

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Mission Possible

**Can mission statements keep a company on track?
Absolutely—but staff input is critical**



TEC LABORATORIES, an Albany (Ore.) maker of poison oak and ivy remedies, tripled its sales in seven years while adding scarcely an employee. The secret? President Steve Smith says his 20 staffers take to heart a mission statement that calls for "innovation, trust, esprit de corps, and joie de vivre."

As many as nine out of ten companies have a mission statement, but they're often a topic of derision. Dilbert's tongue-in-cheek Web site even offers a computerized "mission statement generator," where you can plug in the overblown adjectives of your choice. But not everyone is laughing. Christopher K. Bart, a professor of business strategy at McMaster University in Ontario, concluded that mission-driven companies outperformed their rivals by an average of 30% in key financial measures. While most academic research focuses on large companies, the statements are perhaps even more critical for small ones. "The essence of great strategy is focus," says Bart. "The starting point of all strategic planning is the mission statement."

The real test comes after you write the statement. James C. Collins, co-au-

thor of *Built to Last: Successful Habits of Visionary Companies*, says the words matter far less than how they are brought to life. The mistake most companies make, says Collins, is not setting up procedures to make sure the mission is carried out. What's needed are teeth so sharp that even "if you wanted to ignore what's on the mission statement, you couldn't."

Consider Trinity Communications Inc., a six-year-old public-relations company in Boston with 57 employees. Bonuses are based in part on how well workers adhere to the firm's statement of values of diversity, qual-

ity, social responsibility, and honesty. Three years ago, after employees complained that co-founder Dan Logan wasn't communicating enough—a key tenet of honesty—they docked his bonus. "I got better after that," he confesses.

Getting employees to help draft and implement the mission statement is critical. At Tec Laboratories, self-managed work teams have developed mechanisms that include a "What Bugs You" list, where they can record any inconvenience that is hampering innovation. They also are privy to the company's financials and are expected to use their judgment on spending decisions.

Smith thinks the ultimate authority at Tec emanates from the company's mission itself, not the CEO, "because values last so much longer than just me." The pen, in this case, may just be mightier than the boss.

—SHIRLEEN HOLT



For more on constructing a mission statement, click Online Extras at frontier.businessweek.com

SMART ANSWERS

Q: I'm starting an exporting firm where I bring the business knowledge and contacts to the table and my partner brings the finances and flagship product. I plan to run the company, and will share in the profits. How do we value our contributions when we split up ownership in the company?

—S.C., Hoboken, N.J.

A: First rule of thumb on structural partnerships: There are no hard-and-fast rules. Some partners split everything 50-50 to start on an equal footing. Others buy into capitalism's mantra "the one with the money rules"—throw 10% to 20% to the service partner for sweat equity. Under this scenario, majority interest is determined strictly by the financial contributions of money partners.

Neither approach is ideal, experts say. "Even if they have the best intentions, partners can either be overly selfish or not selfish enough," says Will V. May, president of Seattle's Stoner Investment Bankers.

Better to sit down with your lawyer and CPA and draw up a list of assets each partner brings to the table, including contributions such as patents, customer lists, and entrepreneurial experience. Do you have priceless vendor contacts? Can you secure a fantastic lease on the perfect location?



Put some numbers behind your knowhow, says Tom Cain of White First Union Richmond (Va.) brokerage firm. After you've figured the market value of

services each partner provides, contributions will be represented more fairly. Rather than setting up a partnership yourself, consult an attorney who is experienced in structural startups to avoid unnecessary liability.

—KAREN E. KLEIN

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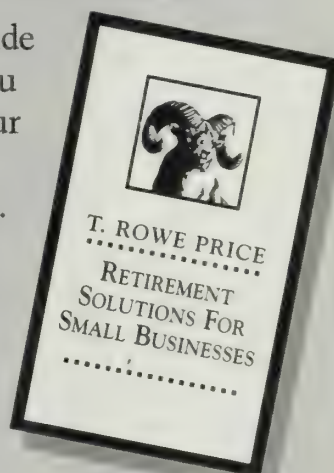
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Cigars Before Wine

Robert Mondavi Jr.—of the winery Mondavis—decided to stake out his own territory

EVER WISH you could just have a successful business, rather than build one? Then listen to Robert Mondavi Jr. Instead of joining the \$370 million, family-controlled Robert Mondavi Corp., where his father is CEO, the 27-year-old wants to be a struggling entrepreneur. Granted, it's not easy for the winery heir, but he's trying. Why? Because he's convinced the best way to learn to run a big business—which he intends to do eventually—is to start a smaller one. His Napa Cigar Co. is in its third year, with just over \$1 million in annual revenues. Mondavi talked about his prospects with reporter Hilary Rosenberg.

Q: Why couldn't you learn how to run a company at the winery?

A: Learning how to run a company is different from learning to manage within a company—especially a family-owned one. Considering that you're always the boss's son, it's difficult from either a positive or a negative stance to get a fair shake. It's also nice to go out on your own and develop your own ideas and own style.

Q: Are there entrepreneurs in your family who influenced you?

A: My father was one of the two pioneers of the Mondavi winery, and my mother's family is also very entrepreneurial. They're involved in umpteen companies in Panama—telecommunications, Internet, construction, heavy-equipment rental. But my real inspiration was the new package designs and new wines coming across the table when I was growing up. There were always new products, new ideas.



"NEW PRODUCTS, NEW IDEAS": The best way to learn a big business, says Mondavi, is to start a smaller one

Q: Was Napa your first business?

A: As a student I had a small business. I bought about a dozen mountain bikes and gave tours through the vineyards. I'd have a nice picnic for the bikers and be done in the afternoon so I could water-ski.

Q: What interested you in cigars?

A: I was duck hunting with my Dad on my 15th birthday. It was 5:30 a.m. Cold. We had a little sip of Scotch from the flask. Then, he lit up a cigar. I felt bad the rest of the day, but it was such a great memory. And ever since

A duck hunt, a sip of Scotch, a lit cigar—and a business is born

then, we've been smoking cigars. It was a way that we communicated. After that, I started making humidors and thought I would start a business selling them. But my father said, "You're shaving the razor. What you really want to be doing is producing the blades."

Q: Where did you get your start-up capital?

A: Initially, I had some money from the biking venture and from work at the winery and at an alcohol distributor. After I came up with a business plan, I got a bank line of credit on my own. But my Dad started laughing when he saw the interest rate. He said, "You got the loan. I'll sign so you can get a better rate." I borrowed \$250,000.

Q: Did you take full advantage of your name in marketing and distributing your product?

A: People saw that the young Mondavi was in the cigar industry, and they wanted to do business with me. Some alcohol distributors who carried the Mondavi portfolio wanted to carry cigars. I hadn't heard of anyone doing that, so I held off, which was a mistake. Fortunately, [Napa Cigar Co. Vice-President] Christian [Grimshaw] said it was a great distribution outlet.

Q: Why didn't you at least use your family name in the cigar company name?

A: We wanted to try to build the company through our own merits. Not that we have, we've redesigned the packaging to incorporate the Mondavi name, for increased marketability. The script of the cigar band, it's Robert Mondavi Jr. Napa.

Q: Will you be frustrated at Mondavi which is such a big company?

A: Yes. But I won't go in and take over a vice-presidency. I want to start at different levels and learn about the company. There's a lot of ways that, sitting in the chair at the winery, I'm in now and having dinner with my Dad a couple times a week, I can know what goes on in that company.

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Free and Uneasy

Web giveaways now include a host of office tools. But watch out for the hidden costs

FREE! FREE! FREE! It has become a virtual mantra on the Web—and an alluring one for cash-conscious entrepreneurs. From free voice mail to free Web hosting to free faxes to free on-line calendars, a parade of new services makes it possible to set up a virtual office without investing a dime.

Just one problem: Sorting the gold from the gravel can be tough. Quality varies widely, and some have intangible costs that can make free programs expensive in the long run. Take fax services, which promise a private phone number and documents delivered via E-mail. Some tack unrelated ads on your documents. And while the service is free to you, the area code may be half a continent away, sticking your clients with big long-distance bills. What's more, the freebies are basic; you may end up paying for premium services that a real business needs—or bear the cost of lost sales when your free (and poorly maintained) Web host goes down.

Even happy customers note drawbacks. John Boyles, a telecommuting equipment engineer in Turlock, Calif., needed to send as well as receive faxes, so he had to pay to upgrade his account with eFax. But overall, it beats lugging a fax machine around. "You don't look a gift horse in the mouth," says Boyles, "and this one was neighing so loudly I couldn't ignore it."

Nor should you, says Ryan Brock, a small-business tech analyst for Access

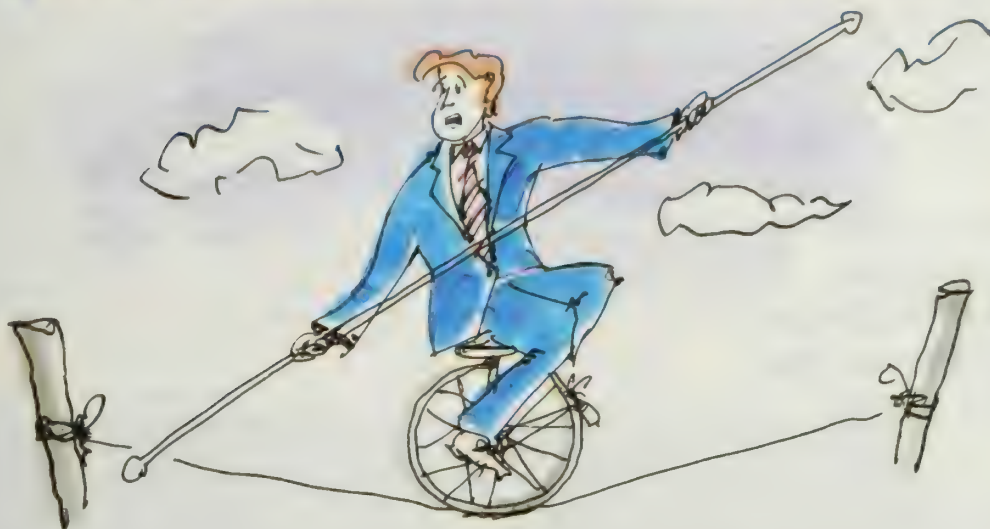


Fax Away—Gratis

More and more sites offer free fax services. Here's a sampling of the most useful.

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EFAX.COM	Receive only	305	On E-mail notification	None	Requires proprietary software; personal demographic data sold
FAX4FREE.COM	Send/Receive	All Southern California	On E-mail notification	Unlimited incoming; 100 Kb outgoing	Everything is encrypted and transmitted through secure digital lines
JFAX.COM	Receive only	209, 531	No ads; upgrades for sale	None	Also offers free voice mail sent to your E-mail account

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Media International: "Just because something is free doesn't mean it's necessarily shoddy."

Indeed, you can find some remarkable deals in messaging centers and wannabe intranets. We reviewed nearly 50 services, screening out those that didn't offer professional appearance and execution. That eliminated contenders such as Intellifax, whose ads overwhelmed their faxes, and in-copp.com, whose Web site offered a bare 1 megabyte of space (others offer up to 30MB). Of the rest, none is per-



Most free messaging centers do the job, though none goes beyond the basics

fect in every respect, but they do the basic job as advertised. Would we hang the fate of our company on them? No. But as backups or safety valves to help you put off buying equipment, or for use on the road, these services might come in handy.

UNIFIED MESSAGING

Want to simplify communications? Earlier this year, several Web companies started offering free voice mail, fax, and E-mail services in one place—your E-mail box. The cutting-edge versions can translate voice into type and vice versa, making it easy to pick up all messages by phone or E-mail. Each relies on different programs, such as Windows Imaging or RealAudio, to open files, so be sure you have what's required. Some assign a toll-free number, while others allow customers to use their existing numbers.

OfficeDomain.com First, you have to take a few minutes to download proprietary software, but you get a generous 15MB to store messages. You also get to keep your own phone number, which, thanks to the software, will accept voice mail and faxes. And you can check E-mail from any computer, not just at OfficeDomain's Web site.

OneBox.com If viruses are a concern, you'll like OneBox's use of inline files rather than potentially virus-bearing attachments. OneBox.com has a Caller ID function that searches your address book to identify and list known callers in your E-mail in box. But you'll have to give up demographic data, and you get only 3MB of space for all of your files. Currently in beta, OneBox only serves Austin, New York/New Jersey, and Northern California.

TeleBot.com Telebot Corp. assigns a toll-free phone number for incoming voice messages and faxes, which can be retrieved from your E-mail account without going to Telebot's Web site. Telebot offers a 10MB mailbox that can handle 60 messages an hour, but its fax capabilities are limited to 25 incoming pages a day, while you can send only a single page with each E-mail. Voice is worse: Five messages a day is the limit.

uReach.com This service packs a lot of punch. You get messaging, a file-sharing calendar service described below, and a toll-free number. It's the only free service that reads E-mail, addresses, appointments, or to-do lists over the phone. On voice mail, you get only 30 free minutes a month before fees kick in.

CALENDAR/FILE SHARING

Want a free company intranet? These close. You can post an online calendar or book, which anyone, anywhere can look at the proper password. It's great for sharing and to-do lists and allows live chat among workers. Weaknesses include lack of a checker (none has one), searches, and other things you take for granted on an in-house

Visto.com The outstanding feature Visto Corp.'s system is its capacity to synch with a Palm Pilot or Microsoft Outlook, and show calendars in different formats. It lacks a search of mind function, but events that interest you can be sent automatically to a scheduler. Visto handles photos, sharing, a to-do list, E-mail, and address book.

Yahoo.com Yahoo! Inc.'s "clubs" offer fewer services, a surprise considering its cutting-edge reputation. There's a message board, a calendar, photo album, shared address book, and a full chat function, but no file sharing or to-do list. That makes it suitable mainly for workers who swap relatively limited amounts of information.

uReach.com Executives on the run dial a toll-free number for access to address book and scheduler, but only 30 minutes are free. On the Net, uReach has an excellent, searchable calendar that sends reminders to a pager or E-mail. uReach also has file sharing, shared bookmarks, and—coming soon—online chat.

—STACY HIGGINBOTHAM



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BIZLAND.COM	30MB	Upload your own pages or use their site builder. One-day service guaranteed	No real-time transactions	Gives full reporting on site traffic and a sir domain name. No ads. For businesses onl
TRIPOD (LYCOS)	11MB	Use Tripod's Homepage 2.0 or upload on your own. 24-7 support	No pornography or bigoted remarks	Domain names are simpler than most services. Ads placed on your pages
WEBNOW.COM	N/A	Can build online in 10 minutes using templates. 18 hour-a-day support	No deviations from the selected layout	Quickest and easiest way to get a simple site advertising your services. No ads

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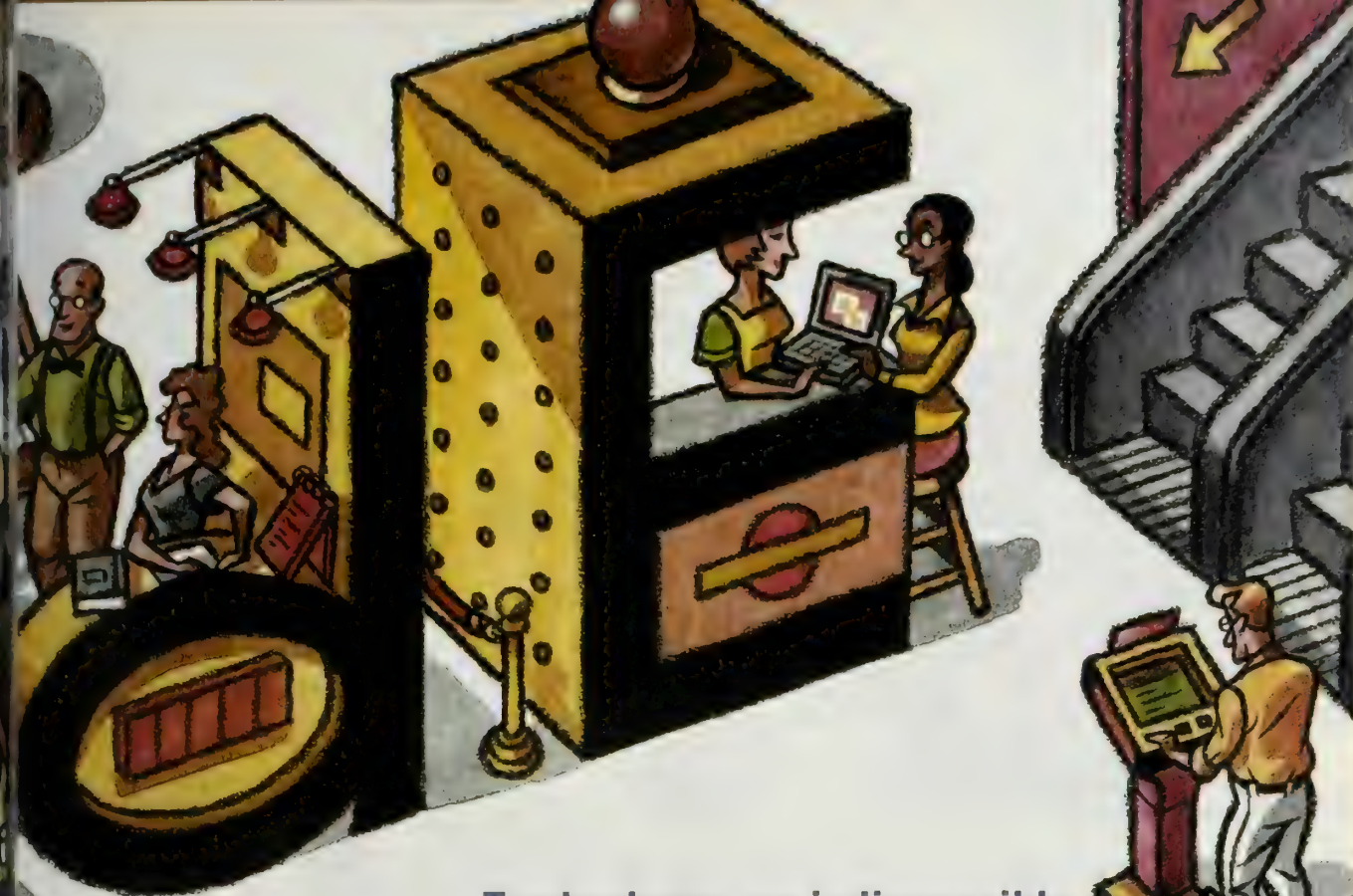
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**Trade shows are indispensable
for making contacts, nailing sales,
and showing off a hot new product—
but you've got to prepare ahead**

by Karen E. Klein

IN THIS AGE of the Internet, when virtually any business transaction can be handled from your own personal computer, the trade show seems like a quaint and clunky relic. Why would you trek off to some distant city with staff and gear in tow, erect the grownup equivalent of a lemonade stand, and spend three long days on your feet in a noisy convention hall, smiling,

oozing, shaking hands, and selling until you're ready to drop? Why would you shell out a small fortune for airfare, mediocre meals, and sterile hotel rooms, not to mention the costs of exhibits, travel, PR, and follow-up, and take precious time away from your business and family? Why, in short, should you bother with a trade show at all? For most small businesses the answer is clear: Because you have to.

While the exhibition industry prematurely predicted its own demise earlier this decade because of the Web, something curious happened: The rise of the virtual office served only to reaffirm the importance of the human touch in doing business. In many industries, the trade show has become a prime marketing opportunity. It's a time to

meet prospective customers, get valuable feedback on your product or service, and close sales. "A trade show enables you to develop trust and rapport with your customers. Once you have that, you can leave voice mails and E-mails with a face behind them," says exhibit marketing consultant Margit Weisgal, president and co-owner of Sextant Communications in Silver Spring, Md.

Taking your show on the road also gives you access to a captive audience that's primed to buy. Consider this: According to *Tradeshow Week's* 1999 Data Book, 86% of show attendees called the shots or influenced buying, 85% had not been called on by a salesperson before the show, and 75% left the show with at least one purchase.

Over the past decade, the number of commercial



exhibitions has grown 4.1% annually, with 4,503 held in the U.S. last year in 514 million net square feet of exhibit space. In all, about 123 million people will attend a trade show this year. The industry, which has been promoting itself lately with the slogan, "There are some things you just can't dot.com," accounts for more than \$100 billion in annual direct spending.



IN TRADE SHOWS WE TRUST:
Sextant Communications' Weisgal

Despite the outlay of time and money, a trade show is still a very economical way to build your business. A national survey done by Data & Strategies Group Inc. in Framingham, Mass., showed that closing a sale with an exhibition lead costs an average of \$625 and takes 1.3 follow-up calls. Compare that with the average \$1,117 cost and 3.7 phone calls needed to close a sale otherwise.

While a small business can easily plunk down upwards of \$5,000 for travel and exhibition costs, it's one way to gain a leg up on your industry's Goliaths. And unlike the social vacuum of the Web, you can see immediately what customers think of your product. Mark C. Foley, sales vice-president at Doumar Products Inc. in Dallas, got that chance in 1996, when he took his patented adhesive-removal solvent, un-du, to the Business Products Industry Assn. show in Chicago. For \$4,000, Foley rented a 10-by-10-foot booth, pinned a sign on the drape, and dreamed up

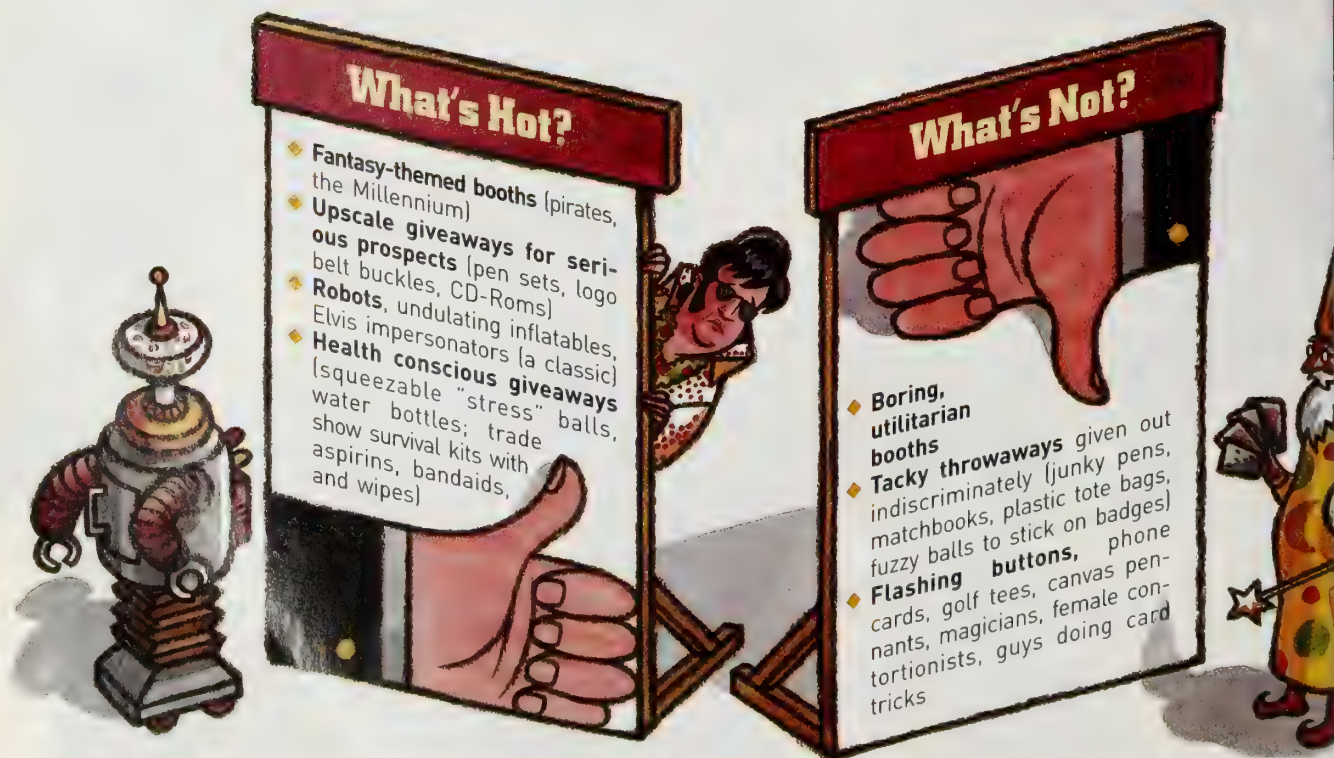
an eye-popping demonstration, using un-du to remove a piece of duct tape from single-ply toilet paper and then reapplying the tape without ripping the tissue.

"We thought we had a great product, but we weren't sure until the crowds started lining up," Foley recalls. His reusable stamp sticker remover stormed the show, beating 225 other exhibitors, including 3M and Dennison Corp., in the Best New Product competition. The company, which exhibits at 40 shows annually, went from \$30,000 in sales its first year to \$4 million projected this year.

Of course, not every newbie experiences runaway success. The challenges are many—choosing an appropriate show, motivating your customers to attend, setting realistic sales goals, and following up on your leads. Yet, when you do it right, your company can squeeze a month's worth of sales into three days, says Mark S.A. Smith, partner in Guerrilla Group Inc. and co-author of the selling Guerrilla Marketing series.

But many do it wrong. A recent survey by the Center for Exhibition Industry Research showed that 54% of exhibitors admitted they didn't set objectives beforehand. "You can hope the people come down the aisle, look at your booth and choose to buy. You probably have a better chance of being struck by lightning," says Sextant's Weisgal.

To choose the right show, scope it out in advance before you exhibit. Winding up at the end of the show can be a costly mistake (page F.28). If you can't attend, talk to other exhibitors, study





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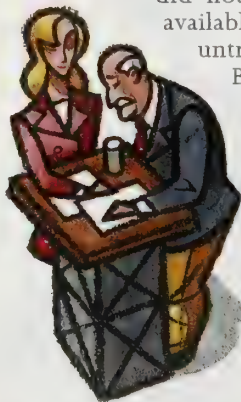
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exhibitor prospectus, and ask if attendance figures are audited. Watch out for misleading head-count statistics. Some shows tally every person walking through the doors over three days, including repeat visitors, show personnel, and exhibitors.

Once you have decided where you're going to exhibit, you will need to inform your prospective customers. Allocate part of your budget for pre-show advertising, direct mailers, and personal phone calls to make sure that those prospects write you into their show agendas. In surveys, three-quarters of show attendees say that they make out their schedules in advance. Direct mail motivates 53% of previous show attendees and 29% of newcomers to visit your booth, according to industry data.

On the show floor, it's important that your staff is well trained to demonstrate your product—and sell it. Trade show attendees who leave dissatisfied complain that salespeople did not meet their needs, weren't available to help them, or seemed untrustworthy, industry surveys show.



Make sure your staff is expertly trained to demonstrate—and sell—your product

Brenda Tildon, a regional exhibit trade-show manager for Bell Atlantic, once attended a trade exhibition with a purchase order for \$25,000 in her briefcase. At a vendor's booth, she stood around waiting to get noticed, then got a fast brush-off. "When I asked a question about the product," Tildon says, "a business card was all but thrown at me with the comment, 'Give this to your boss.'" Instead, Tildon made a U-turn right into a competitor's booth and gave them the order.

Getting attention on a crowded show floor isn't easy for a newcomer. However, you can create a respectable-looking booth inexpensively without being tacky: Buy good quality, three-sided skirts for your tables and portable banner stands for signage, and make flyers on your computer to set on plastic literature racks. Don't clutter the space with lots of giveaways, but do hand out your business card and a small gift with your logo and phone number on it to qualified leads. One way to boost your profile is to become an expert resource to others in your industry. Nancy Watson, founder of A/E Management Services in St. Petersburg, Fla., a 12-employee firm that sells proposal-generating software, participates in industry seminars that run concurrently with many shows. "I bring my

Here are some resources on trade shows to help you get started:

THE CENTER FOR EXHIBITION INDUSTRY RESEARCH: 312 808-2347; www.gotoexhibitions.com. Contact this Chicago-based nonprofit for helpful "How to" packages for first-timers.

TRADE PUBLICATIONS: *Tradeshow Week* 323 965-5300, www.TradeshowWeek.com and *Exhibitor Magazine*, 507 289-6556, www.ExhibitorNet.com, cover the exhibition and trade show industry. Check out their valuable archives.

THE TRADE SHOW EXHIBITORS ASSOCIATION, 703 941-3725, www.tsea.org, helps businesses who want to exhibit at shows.

THE EXHIBIT DESIGNERS AND PRODUCERS ASSOCIATION, 404 303-7310, www.edpa.com, represents companies that manufacture trade show booths.

TRADE SHOW DIRECTORIES ON THE WEB include www.tsnn.com, www.scheduleearth.com and www.expobase.com.

products to the seminars and make sales afterward. Or people who've attended will come by the booth later," says Watson, who attends to ten trade shows annually.

For most exhibitors, the really hard work begins once the show is over. That's when you have to assiduously follow up on all of your sales leads—preferably as soon as possible, so your company is still fresh in their minds. You should analyze what you learned from the show experience and adjust what you're doing accordingly. Expect to suggest you commit at least a third of your trade show budget to the follow-up.

And if you think you can skip the whole affair because all your deals are done elsewhere, think again. Trade shows become a gossipy society unto themselves, where your competitors might flood you with rumors in your absence that your company is ready to bite the dust. In some sectors—high tech manufacturing, transportation, communication and wholesale goods—trade shows are the preferred venue for doing business. "When you're buying something expensive, there are times you've just got to kick the tires," says Michael Hough, a Penton Media Inc. show manager. You've got to be there for those customers—further proof, apparently, that 90% of success in life is just a matter of showing up.

 Find out where the next trade shows are scheduled. Click Online Extras at frontier.businessweek.com.

A photograph of Maria Barraza, a woman with short dark hair, wearing a black long-sleeved top. She is leaning over a dark wooden table in a studio setting. On the table are various items including a blue container, a red container, and some fabric. In the background, there are mannequins wearing dark coats, and large windows letting in natural light. The floor is made of polished wood.

and pick the buttons on my
ats. I'm not about to leave
y cash flow to just anybody."

Maria Barraza
Designer, Owner of Barraza New York
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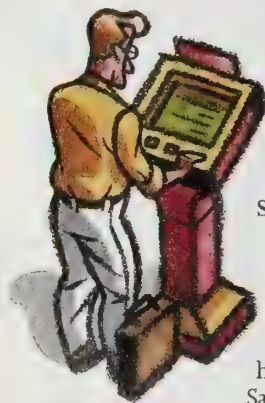
800-SUCCESS or visit www.americanexpress.com.



Show and Sell

At a big trade show, a novice learns the ropes and a veteran gathers leads

by Karen E. Klein IT'S 8 A.M. AT the Los Angeles Convention Center, and Fabien Hyon is on an adrenaline high. He has been up since 5:30 getting ready for opening day. Standing in front of the \$6,000, 20-by-30-foot black steel booth he built himself, the 25-year-old, Paris-born entrepreneur nervously scans the vast exhibition hall—row upon row of hungry



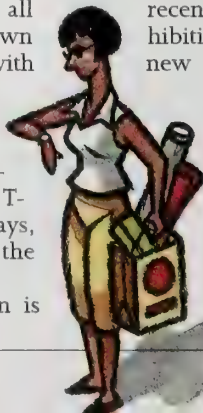
entrepreneurs ready to compete with him for business. He jockeyed hard for this location. It's close to the large, well-appointed booths of the industry leaders he hopes will strike a deal with his 1½-year-old San Francisco startup, Abvent Inc., a maker of architectural design software.

Hyon rallies his little sales army—seven staffers even younger than he is, all dressed in dark pants and button-down beige-and-brown shirts emblazoned with the company's logo. "We need lots of energy from everybody. You've all got to be on your toes," he says. They can all see the boss is tense. As he unpacks the boxes of black company T-shirts and CD-ROM samples for giveaways, he worries that he'll never recoup the \$55,000 he has sunk into this show.

Just a few aisles away, Jas Dhillon is

also preparing for the 10 a.m. floor opening. The only difference is, he's flanked by 15 staff members and \$80,000 worth of wooden faux-Roman columns and built-in demo screens all displaying the new logo of his Web-based software company, BlueLine Online Inc., founded in 1997. With a lightning-quick startup, the 51-employee company has recently secured financing to fuel its exhibition budget and the launch of its hot new Internet supply-chain management system software, ProjectNet 3.0.

Welcome to A/E/C SYSTEMS '99, the Super Bowl of trade shows for technology companies serving the architecture, engineering, and construction industries. Like the other 347 exhibitors who are camped out for three days to pitch business to 12,000 Information





FFS:
mixed
Hyon
return

Technology professionals, Hyon and Dhillon need to see and be seen if they want to be taken seriously. For three days, they will pitch their products, schmooze prospective customers, and pass out free goodies. If they're lucky, they'll get some serious sales leads, and if they're really lucky, they'll close some deals on the spot.

While Hyon is a relative newcomer (he was all but invisible in his first, shared booth last year), Dhillon knows the routine well. In fact, he so hated trade shows, he sat most of them out last year. But BlueLine's absence provoked a competitor's gossip that the company was in trouble. This year, Dhillon, who emigrated 19 years ago from India's Punjab state, is back with a vengeance.

Over the next three days, BlueLine will host a press conference, sponsor four educational sessions, and serve on two industry panels. Dhillon has invested close to \$250,000 in this show, in the hopes of snaring \$3 million in new business over the next year. "You've got to do it right or you can use your money better in other ways," he cautions.

As a rule, small companies have to work harder to compete with the giants, who have far greater resources and more staffers to do the niggling work of trade-show publicity, preparation, setup, and scheduling. Their sales forces fly in for the first show day, fresh and ready to make deals. "We have to be fresh and ready to go, too," Hyon says, "even though we've done 10 times more work behind the scenes than they have."

Across the aisle from Abvent, a performance artist shrouded in a bedsheet undulates to New Age music on a stage sponsored by one of the big exhibitors. He morphs from a fetal position to an upright stance with arms and legs out-

stretched. Curious passers-by pause to figure what on earth is going on. Hyon couldn't afford any such glitz. His entire budget went for motion, travel, space rental, hotel, and marketing materials.

At 11 a.m., Hyon gets a nibble: A couple execs drop by from one of the companies he hopes will "hot bundle," or co-package, his software with their own computer-aided design software. They want to meet him for a drink later—the same execs who ignored him last year.

Meanwhile, over at BlueLine's booth, crowds of white-



We Stayed Too Long at the (Wrong) Fair

What if you put up a trade-show booth and nobody came?

Spouses Linda McPherson and Jim Parker learned the hard way the importance of choosing the right trade show as they languished in a far corner of the A/E/C Systems show last May in Los Angeles, hoping to hawk the 40-pound "pneumatic button punch" that Parker invented after 25 years in the construction business.

Parker Manufacturing Co.'s sleek yellow tool, intended to crimp steel building seams tight, received barely a passing glance from show attendees. "We need to reach structural engineers who specify what gets done on the decking and flooring of steel construction jobs," Parker said as attendees scurried past his 10-by-10-foot booth to the nearby food court.

When they signed up to exhibit at this show, which draws mainly information technology professionals in the architecture, engineering, and construction industries, the Phoenix couple based their decision on the show's promotional literature and never visited it themselves beforehand. At the A/E/C show, traffic was so slow in their booth, the duo gave up hours before closing time. And six weeks later, they hadn't made a single sale from the show.

This wasn't their first trade show snafu. At the Rocky Mountain Industrial & Machine Tool Show in Denver, McPherson recalls, "We walked in and saw these massive machines the size of fire trucks, for the machining industry. There we were with our little pneumatic button punch." Now, Parker says, "Before I do this again, I'll talk to some people in my trade who've gone to shows and seen more of the industry than I have."

That's an \$8,000 lesson he won't forget.

—KAREN E. KLEIN



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shirted engineers stand three deep to watch a slick videotape demo. "We spent \$10,000 on the self-running introductory screen alone," says Bill Allison, BlueLine's vice-president for operations and administration. Dhillon winced at the cost. But so far, it's paying off. The project director of Universal Studios' hot new 3-D thrill ride, Terminator 2, watched the ProjectNet demo and wants to discuss new construction projects. This is one of the best trade-show leads BlueLine has gotten since the company was hired in 1997 to manage construction of the \$2.1 billion Venetian Hotel, Casino & Convention Center in Las Vegas. Dhillon grins widely at the thought of this potential windfall.

Several weeks later, Hyon and Dhillon can just begin to assess their trade-show experience. Dhillon can see the gamble clearly paid off this time. He figures he got 1,000 qualified sales leads, at about a quarter of the typical \$8,500 it costs him to drum up a sales lead outside of a show environment. Even better, Dhillon signed up 100 new projects at the show itself, bringing in \$2.5 million to \$3 million—right on target. Dhillon plans to do half a dozen shows this year, maybe eight next year. As for Terminator2, Dhillon has

exchanged more information with the representative from Universal and expects to discuss specifics in the next few weeks. Deals like this can take months to pull along, Dhillon knows.

Hyon didn't fare nearly as well. Direct sales at the show, and follow-ups on 450 leads in the months after the show, brought his company a total of \$45,000—still leaving him \$10,000 in the red. And those promising meetings with potential customers? Not a single company signed on with Artistic, Abvent's software. But the advice he received was invaluable. His main problem, those prospective customers told him, was that his product was not commercially viable. So Hyon, who acknowledges that a fancier booth wouldn't have helped, is going back to the drawing board and plans to assign one or five developers to the project.

Is he ready to give up on trade shows? Not a chance. He's already making plans for A/E/C 2000.



Get more tips on successful trade shows. Click Online Extras at frontier.businessweek.com.

What'll It Cost You?

Trade show costs vary widely by show, industry and location. Here are some typical costs incurred by one cost-conscious small business exhibitor (Doumar Products Inc. of Dallas):

ELECTRICITY: \$100

BANNERS: \$2,500 for banner in high-traffic area

PRESS KITS: \$375

SIGNAGE: \$450 each

RENTAL (EXHIBIT SPACE): (10' x 10' booth) \$1,800

BOOTH: Portable modular exhibit booth with case, panels and lights \$7000

SHIPPING: \$150/roundtrip for floor displays and product samples

GIVEAWAYS: \$400 for 100 1-oz. product sample bottles

RENTAL (BOOTH ACCESSORIES): table, chairs, carpeting, etc. \$500

HOTELS: \$110/night average four nights

FOOD AND ENTERTAINMENT: \$300 per diem for two

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One-Stop Tech Shopping?

It's not reality yet, but the dream is to fit everything in one neat package

by Wayne Kawamoto

ADAM CHILVERS HAS nothing against shopping around. After all, his company, Wine Country, built on customers seeking out high-quality products at discount prices. But shopping around for computer gear? That was what Chilvers expected to be doing when he hired a consultant to get his Wine Country Park (Fla.) store ready for E-commerce. But the consultant knew software, not hardware, and Chilvers was left to round up the rest of what he needed from various vendors. He felt like a novice who couldn't tell a zinfandel from a merlot. "I'm a wine guy," he says, "not a computer genius." Before long, Wine Country dropped the consultant's piecemeal approach and turned to IBM, which promised a one-stop shopping experience—from keyboard to complex E-commerce software. The job took four weeks and cost \$10,000. More important, says Chilvers, it let him focus on running his company instead of its computers.

Ever since the PC became a tool in small businesses, owners have dreamed of a technology nirvana that spared them the agony of playing systems manager. They've envisioned calling one number, having a vendor ask a few questions, then tell them what they need. A delivery person wheels in r



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equipment a few days later with a technician who installs it. If anything breaks, the supplier gets it fixed. One call, one stop, one shop.

If some of this sounds familiar, you're right. Before the PC, long-forgotten companies such as Sperry Rand fielded armies of technicians who ensured their big computer systems were set up perfectly at customers' sites and kept running. Not such a bad idea, it turns out. Suddenly, it's a business model many PC manufacturers are pursuing.

As Chilvers' experience indicates, IBM—not surprisingly—is ahead in the race back to the future, dusting off its old playbook to develop the only true one-stop shop serving small business. The giant of the mainframe era recently began selling PCs, servers, and peripherals directly to small companies, and offers an array of services for building custom networks and intranets. Want Web access or hosting, or an E-commerce site? They'll arrange that, too, and host it for \$25 to \$200 per month.

IBM's rivals are close behind. Compaq Computer Corp. is exploiting a similar heritage, having bought Digital Equipment Corp. last year, and now offers installation services and contracted repair through Digital's extensive field organization. The online component of Compaq's strategy isn't quite as seamless as IBM's plan, but Compaq covers its bases. It has agreements with CompuServe and GTE to provide Internet access, and even offers small businesses E-commerce through an agreement with INEX Corp. What about Dell Computer Corp., lauded for pioneering direct sales? Until now, it didn't install networks; so Dell is partnering with some old mainframe and minicomputer companies that have refocused on service. Ask Dell for networking help, for instance, and it will get Wang Laboratories Inc. to send a qualified technician—whose work is warranted by Dell. A year down the line, a Unisys Corp. rep might be dispatched to solve a nagging server problem. As for the Web, Dell already offers access via AT&T. It doesn't help small companies build customized E-commerce services or intranets. Still, some current Dell customers say they'll take a

close look, if only because the convenience provides some relief from the onslaught of new, sometimes incompatible products. "One-stop shopping sure would make things simpler," says Santiago, chief technology officer for Arial Systems Corp., a communications-software company with 40 employees in Vernon, Ill.

All this service costs extra, although perhaps more than entrepreneurs are willing to pay. Study by Ray Boggs, director of small-business research at International Data Corp. in Framingham, Mass., have found most business owners consider a premium reasonable for the convenience of working with a single vendor. And whatever the real cost now, competition is likely to lower it. Gateway and Micron Electronics Inc. are already making moves toward the one-stop model (they have already signed up Unisys and several Internet providers).

What's not to like? Charles Rutstein, an analyst with Forrester Research Inc. in Boston, notes that issues such as design services and order fulfillment still need to be managed by the entrepreneur. "They're not exactly turnkey," he says. Even if they were, says Chris Goodhue, an analyst with Galileo Group Inc. in Stamford, Conn., using a single vendor means you risk not getting the best of breed for each part of your system; you're locked into a package of hardware and services, taking the good with the bad. The key, he says: Focus on the services. If they are top-grade, it's worth the trade-off.

Just remember, there's nothing like experience to work the bugs out of technology, so it's best to stick with a company that has offered a particular service for at least a year. And hardware vendors just getting their feet wet with Internet access won't be long, though, before they are fully immersed, and nirvana—at least for technology—will be just another purchasing option.



For tips on picking a one-stop consultant, click Online Extras at frontier.businessweek.com

One Step Closer

Leading PC makers are moving toward one-stop shops, but most have a ways to go.

ISSUES	HARDWARE, SOFTWARE	NETWORKING	INTERNET ACCESS	WEB PAGE DESIGN	INTRANET DEVELOPMENT	WEB PAGE HOSTING	BROADBAND	E-COMMERCE
COMPAQ www.compaq.com	Yes	Yes	Via GTE, CompuServe	No	Yes	No	Via GTE	Yes
DELL www.dell.com	Yes	Yes	Yes	No	No	No	Via U.S. West	No
GATEWAY gateway.com	Yes	No	Yes	No	No	Yes	Via g.lite	No
IBM www.ibm.com	Yes	Yes	Yes	Via IBM Partner	Yes	Yes	Yes	Yes
MICRON ELECTRONICS www.micronpc.com	Yes	Yes	Via Earthlink	No	No	No	Via Covad	Yes

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Making a Bundle

**New Web services are
pulling together all of a
company's financial needs,
from banking to benefits**

by Jeremy Quittner

ASKING CLINT CLEMENS to sit down with his financial statements isn't as simple as it sounds. Clemens is an advertising photographer who travels 150,000 miles annually. His office is in Rhode Island, but his bookkeeper lives in New Hampshire, his production facilities are in Los Angeles, and he has agents in New York and Italy. Even if Clemens had the time to do all his paperwork, there was no guarantee it would all be in the same place.

Then in April, he heard about OneCore Financial Network Inc., a new small-business service promised to do it all online. In short order, Clemens had transferred everything—from bookkeeping to payroll for his four-person staff—and started managing by modem. "It makes everybody's life easier," he says. "It allows me to have a financial history on my laptop."

OneCore, now 16 months old, isn't the

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nonbank selling financial services to small companies. The field includes several giants, led by Merrill Lynch & Co. But Merrill sells only through its own brokerage-based sales force. OneCore, taking a page from E*Trade Group Inc.'s playbook, caters to the do-it-yourself crowd with a system that's inexpensive, takes only minutes to set up, and offers more functionality than Merrill's tentative online effort.

OneCore uses some big names of its own. The basic, \$25-a-month service provides an interest-bearing checking or sweep account administered by mutual-fund company Scudder Kemper Investments Inc. Other offerings include payroll processing by Computing Resources, bill payment through



"GRIZZLED VETERANS": Littman-Quinn (left) and Star assembled a team with experience in small-business systems

CheckFree, 401(k) administration by Bankers Systems, merchant card services from Michigan National Bank, and equipment-leasing loans from BankVest Capital, with OneCore taking a percentage of each deal. All transactions are handled online, and clients can download information into standard small-business accounting programs, such as QuickBooks and Peachtree Accounting.

The company is the brainchild of founder Barry L. Star, 41, who says it was conceived in 1995, when he was charged 85¢ to deposit a \$100,000 check in his consulting firm's account. Charging nuisance fees on incoming deposits didn't seem very smart to Star, a former executive at Apple Computer Inc. and Fidelity Investments, where he worked on Fidelity's On-line Xpress system.

Using \$1 million raised from friends and family, Star set up a company in 1995 to develop his idea, but it ran out of money and shut down after only nine months. Still, the idea kept nagging at him, and Star managed to persuade two small venture-capital firms to put up \$3 million in fresh capital. By April 1998, Star had assembled a team, led by president and CEO Jack Littman-Quinn, with experience de-

veloping small-business systems. If nothing the process gave him a feel for what entrepreneurs go through. "I had all my mother's folding chairs around the conference table," Star says. "We were extremely frugal." But the Web venture was a flop, too. "This is not a group of 25-year-olds sitting around trying to figure out what to do," he says. "This is a bunch of grizzled veterans with marks on their backs and scar tissue all over the place." By last November, OneCore was on the move, using an office in Woburn, Mass., as its base.

Competition will come from many sides, including payroll processors, such as Paychex Inc. in Atlanta. OneCore, however, is chartered as a national broker-dealer, so it can operate immediately in all 50 states, while banks must register separately in each one. Another strength is range of services. Payroll companies aren't bankers, and Net banks offer little more than online checking. Says Octavio Marenzi, research director at Merrill Research Inc. in Newton, Mass.

Tackling Merrill Lynch promises to be more of a challenge. The brokerage's Working Capital Management Account and Retirement Cash Management Account offer many services similar to OneCore. These include a cash account (fee: \$150 a year), 401(k) plan administration, merchant card services and payroll processing. While OneCore says it has fewer than 1,000 customers and \$1 million in revenues, Merrill Lynch boasts 600,000 businesses using parts of its two small-business packages—80,000 of whom access accounts online.

Can both prosper? Marenzi says OneCore has a solid product offering, but it's no match for Merrill's customer base and powerful brand. But Dan More, a director at Mainspring Communications Inc., an Internet strategy consulting firm in Cambridge, Mass., says demand for online small-business services is big enough for a number of players. The chief challenge will be attracting customers by keeping them "from defecting to the next service with better services and better rates," he says.

And OneCore isn't exactly a helpless startup. It has a grubstake of \$10.5 million in venture capital, includes a second-round booster shot from Andover (Mass.)-based CMGI, one of the most successful well-connected underwriters of Web business, including Lycos and GeoCities.

What does Merrill Lynch say about this upstart? Spokeswoman Wendell Collins says OneCore isn't even on their radar screen. But Merrill promises major revamping of its own online site next month. Collins adds: "We are not just offering a product, we are offering a whole range of solutions delivered by people."

Who's right? In the end, that will hinge on man vs. machine, but whether the actual service itself is any good.



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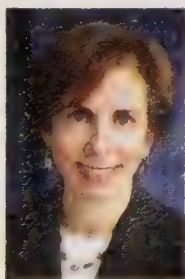
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Camp Moolah

It's the '90s. Forget the campfire. These would-be entrepreneurs are burning for business.

BY ROBIN D. SCHATZ

WHENEVER I THINK of summer camp, I remember tromping around in the muddy Pennsylvania woods after a rainstorm, triumphantly catching bright red salamanders and gray-green toads. Okay, I admit, it was a long time ago. Clearly, I'm way behind the times—or maybe I've just entered a parallel universe.

here to tell you how treating people well will actually increase your bottom line," she says. They practice proper handshakes. Next week, table manners.

There's no tetherball at this camp. Think golf, squash, and tennis, offered through Krinsky's other camp programs. For field trips, these kids tour Philadelphia's five-star Rittenhouse Ho-

and games. My Web search turns up a good half-dozen, including Millennium Entrepreneurs Camp, in Chula Vista, Calif., which takes them as young as the third grade. "I know a couple of nine-year-olds whose parents say the kids are already trying to make money," says founder Tonja McCoy.

Perhaps it was inevitable. After all, entrepreneurs are now cultural icons. Wage slaves are out, IPOs are in. These kids can't remember life before the bull market. They already see that being a wage slave isn't nearly as cool as doing an IPO. About a quarter to a half of Krinsky's business campers already have their own stock portfolios.

Nadia Schwartz, 14, from Brookline, Mass., the lone girl in this session, confesses: "I've been interested in the business world all my life, and I want to get to know it better." Ben Ballen, 15, from Katonah, N.Y., already runs a travel service from his home computer.

During four weeks in Krinsky's program, the teens learn to write a business plan, learn to use the proper fork, and prove their golf swing. Perhaps the most exciting to the kids, they practice trading stocks and commodities. Last year, Krinsky calls, one camper went home and took advantage of the stock market plunge. By December, he'd paid his mother

the \$3,400 in camp tuition. "I said to the mom, 'what a great investment,'" crows Krinsky. "I'm into returns."

When I returned from summer camp after four weeks in the country, I could raise a flag and catch critters like a pro. I proudly had my mother a glass terrarium, complete with a fat toad. I can't say she's thrilled, since she's not exactly an animal lover. But I suspect she was proud of the life skills I'd developed—the ones a kid of my generation really needed. In that regard, nothing has changed.

Schatz, a small-business editor, can be reached at Robin_Schatz@businessweek.com



"GO FOR THE GOLD": Julian Krinsky, at a Ferrari dealership owned by a dentist-turned-entrepreneur, explains to campers the rewards of having one's own business

Here I am hanging out with the kids in the "business track" at Julian Krinsky Enrichment Camp, nestled on the leafy suburban campus of Haverford College in Haverford, Pa.

Witness these happy campers: one girl and 14 boys, clad neatly in khaki shorts and exceptionally clean T-shirts—many with collars (gasp!). They're listening to entrepreneur Roger Grass, who just paid \$26 million to buy a baseball card company, impart some pearls of wisdom: "Just because you can get the money doesn't mean you should get it. If the concept is crap, you shouldn't get it."

Later, they sit most politely for a talk by Mary A. Mitchell, author of the syndicated *Ms. Demeanor* column and a consultant in business etiquette. "I'm

tel. They ooh and aah over the Ferraris at a local dealership, while the owner, an ex-dentist, extols his new lifestyle.

"I told the guy, 'one day they'll be buying stuff from you.' I truly hope I inspired them to go for the gold," says Krinsky, an émigré from South Africa and pro-tennis-player-turned-accountant, who started a tennis camp two decades ago with partner Adrian Castelli. They've since branched out, into golf, cooking, academics, and drama. Five years ago, they added business. Out of 2,500 kids every summer, about 100 study business.

While summer entrepreneur camps are still a tiny niche market, they're a true '90s phenomenon, as parents seek value-added experiences, not just fun



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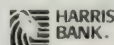
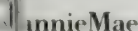
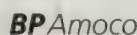
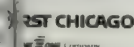
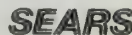
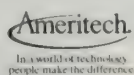


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The Man Who Came With Dinner

B. Morgan Cislino Has a Lock on Phoenix' Door-to-Door Catering

For B. Morgan Cislino, meals-on-wheels means business, not charity—a \$3 million system for delivering eats to homes, hotels, and offices for 120 Phoenix-area restaurants. From bean-stuffed burritos to trendy gourmet cuisine, Cislino's Delicious Deliveries Inc. in Tempe, Ariz., rolls out a movable feast.

The concept is simple. Cislino publishes menus in a cheaply printed booklet left at hotels, in convenience stores, and on residential doorsteps. Customers phone orders into the company's 15-seat call center, which faxes them on to the restaurants. Then, drivers—mostly college students with their own cars—are dispatched. How do the numbers add up? On average, Delicious Deliveries drops off 400 meals a night at \$35 apiece. With a 30% commission and a \$4.25 delivery fee, Cislino stays well fed.

Cislino, 28, didn't start Delicious Deliveries (modeled on a national franchise, Takeout Taxi) but joined it in 1994 when a friend asked him to help boost profits and ex-

pand from its original home in Tucson. Cislino, then 23, so with a vengeance. There were 11 competitors in Phoenix when he came to town in 1995; he scooped them all up through mergers and acquisitions financed with company revenue (he took practically no salary). He also bought out three former college-buddy partners and now owns 71% with one silent partner. "We're basically a monopoly," says happily. That hasn't deterred him from cost cutting. He co-developed time-saving custom software that automatically maps a delivery route, using Caller ID to locate the origin of the order.

Since Delicious Deliveries now takes him only 10 hours a week, Cislino is rolling out a new business: consulting on similar ventures in other cities. What's behind the trend? "We've gone from a nation too busy to cook to a nation too busy to eat out," says Joe Yuhaus of the National Restaurant Assn. Until we're too busy to eat at all, Cislino's phones should keep ringing.

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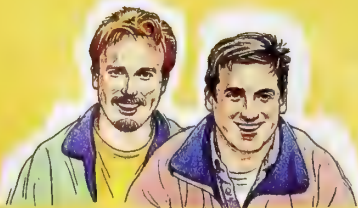
The lobster that made it all the way from Portland, Maine, to Easy Street.

A young boy in Ames, Iowa, runs out to the mailbox. He yanks down the flap and peers in. A package greets his eyes. It's moving slightly. It's smelly. It has **Caution: Live Animals** written all over it. He winces. He takes a breath. Then he runs the box inside, yelling at the top of his lungs, "Dinner is here!"

This is just the sort of scene that's happening around the country, thanks to the online business **TheLobsterNet.com**.

To New Englanders Lance Cleveland and Phil Rose, lobsters were stew meat. But they knew that to some, their product was a delicacy. To people in Tucson. Or Hollywood. Or West Amarillo.

But when they set up their Web site, nobody had heard of **TheLobsterNet.com** so the inventory started to, well, smell. To prevent further spoilage, they resorted to eating lobster dinners every night. (It sounds better than it was.)



Triumphantly, six months and about eight gallons of bisque later, their first order finally came.

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They used ClickTrade, a service where other online businesses who send customers to **TheLobsterNet.com** get a commission. Pretty soon click-thru's to **TheLobsterNet.com** started coming from sites they never would have thought of. One order came from a wedding chapel site. Another from a Florida golf supply site. A big response from the home dating network. (Nothing says lovin' like a live lobster.) Then they used Submit It! to easily register "lobster" with dozens of search engines. So whenever someone types lobster whether it's "I'm looking for lobster," "I need a picture of a lobster," or "My rash looks like a lobster," their name pops up. They were hot. Dare we say, boiling.

Lobster étouffée is nice, but a healthy portion of profit is better.

Lately, the guys from Maine boast 50,000 online visitors — and nearly 200 lobster orders — every month. For the first time in a long time, Lance and Phil are knee-deep in something other than seaweed.

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IT EXACTLY WHAT YOU'D CALL A WEAK SISTER

DeBartolo is about to lose the 49ers to sibling Denise

sight almost as familiar to San Francisco 49er fans as a diving touchdown by Jerry Rice: the DeBartolos' feuds. The final battle between the owners of the team—Edward J. DeBartolo Jr. and his sister, Denise DeBartolo—may, however, be just the beginning.

Two months of fighting behind closed doors of a federal court in San Francisco, word leaked on July 30 that a tentative deal has been reached. Eddie quickly dismissed the report as speculation, and any pact must be approved by the federal judge. But inside the family, that by mid-August, York, the old head of the family's Youngs-brother real estate holding company, will walk away with one of the most valuable franchises in sports.

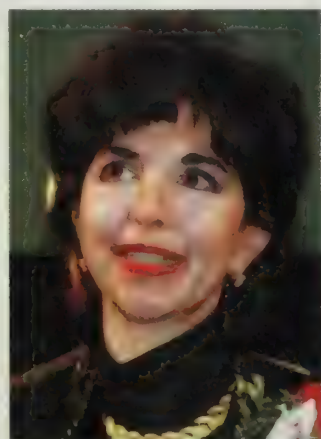
The 52-year-old brother, Eddie, currently run by the NFL from operation team he has run since 1977, will receive some key real estate assets worth valued at an estimated \$120 million, sources say. And the settlement opens the way for construction of a new stadium and retail complex considered key to the team's long-term survival.

WEAK. That would end a family feud that has raged since Edward DeBartolo Sr., father of Eddie and Denise, died in 1994. It really got bitter late 1997 when the National Football League forced Eddie to step down after a wide-ranging federal indictment of bribery in Louisiana's sports industry led to his indictment. Eddie pleaded guilty in 1998, paying \$400,000 to secure a casino license, \$1 million in fines, and agreed to a settlement with former Louisiana Governor Edwin W. Edwards.

Insiders say the internecine war has significantly worsened the 49ers' finances—despite three division championships and a Super Bowl in the past three years. "It's pretty weak financially," says Marc S. Ganis, president of Bay-based Sportscorp Ltd., which owns sports franchises. He figures the team profited last year only from the revenue it took in expansion fees from

the new Cleveland Browns franchise.

With the agreement, the 49ers would be able to move forward with the new stadium Eddie had been planning at Candlestick Point, near the team's existing stadium, according to Sam Singer, a spokesman for Edward J. DeBartolo Corp. The stadium has been a key issue in the sibling dispute. Eddie was to have received a \$10 million "work site



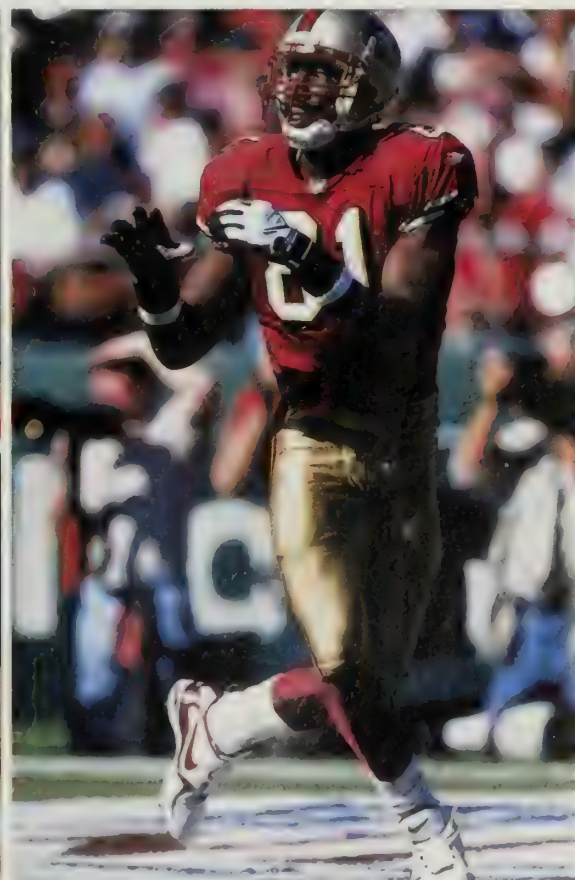
DUELING DEBARTOLOS: Insiders say the family feud has hurt team finances

fee" from Prince William (Va.) developer Mills Corp., and a 22% stake in the \$200 million mall that was to have been built alongside the new facility.

Accusing Eddie of "self-dealing," York's suit seeks to have his contract with Mills voided. It also demands the repayment of more than \$136 million that the family corporation had lent to

Eddie for various deals and for what his sister calls a "lavish lifestyle." Mills Corp. declined to comment, although a spokesman says it remains committed to the project. Eddie claims the money from Mills was partly intended to help win voter approval in 1997 for \$100 million in revenue bonds for the stadium.

Denise and her businessman husband, John York, who has been running the team—along with former 49er coach and general manager Bill Walsh—have said they intend to find "an economically sensible" plan to build the stadium. They also say they will keep the team in San Francisco. And while their spokesman maintains that the Yorks have no plans to sell out, the Washington Redskins and one-year-old Jack Kent Cooke Stadium sold for \$800 million earlier this year, and there are plenty of newly minted Internet billionaires in the Bay



Area who might be potential buyers.

As for Eddie, he may not be headed for the showers just yet. He recently sold his home in the posh San Francisco suburb of Atherton for \$5 million and is expected soon to launch a new sports and entertainment empire.

By Ronald Grover in Los Angeles

44-year-old day trader in Atlanta snaps and murders 12 people. A pair of teenagers barge into Columbine High School in Littleton, Colo., and gun down 12 fellow students and a teacher. In rural Arkansas, a 13-year-old and an 11-year-old assemble a collection of 10 firearms and kill five at an elementary school.

With each new massacre, America's outrage over gun violence flames higher. A Harris Poll conducted on July 1 and 15 showed that 73% of Americans now favor handgun controls. Hoping to capitalize on this passion, Democratic Presidential hopeful Bill Bradley is demanding universal registration of every handgun—a proposal that, by firearms owners, raises the specter of an outright

are partially responsible for gun violence. The suits seek millions to cover local government expenses for health care and policing. That's a scary prospect to many gun executives because the business is financially shaky. While 1999 will be a strong year, thanks in part to fears of new restrictions on ownership, most executives expect the market to steadily shrink over the long term.

EAST-WEST SPLIT. Together, these problems could threaten the survival of some companies, says Andrew Molchan, director of the National Association of Federally Licensed Firearms Dealers. If some lawsuits go against the industry, many of the major producers "will be forced to operate under bankruptcy-court protection," Molchan predicts.

The intense financial pressure bearing down on gunmakers

could have a ripple effect far beyond the secretive, comparatively small \$1.5 billion firearms business. Fearing for their survival, a break-away group of bigger, more established companies is starting to show a willingness to compromise with the industry's many adversaries. Located largely in "Gun Valley," the swath of Connecticut and Massachusetts where the American firearms business was forged, this group includes Smith & Wesson, Colt's, and Mossberg, among others. Also in this camp are some foreign-owned manufacturers such as Glock, an Austrian company with U.S. headquarters in Atlanta.

While these companies are still passionate in their belief that Americans have a constitutional right to bear arms, they are beginning to drop their traditional hard-line opposition to any new form of regulation. A few executives, for example, are stepping out front and saying they would agree to tougher background checks at gun shows. "I, for one, would be very much interested in discussing fundamental changes" in the gun business, says

Alan I. Mossberg, chief executive of Mossberg Corp. in North Haven, Conn., the nation's second-largest producer of shotguns. "When guns get into the wrong hands, it doesn't help the industry."

Words such as these are heresy to many smaller manufacturers—not to mention the politically formidable National Rifle Assn., led by actor Charlton Heston. "I don't think it's in [the manufacturers'] best interests to negotiate. When the tobacco companies talked about settlement, they begat more lawsuits," says James Baker, the NRA's chief lobbyist. These views are widely echoed in the other major center of the U.S. gun business, Southern California. Headquarters of several small manufacturers of cheap Saturday night specials, such as Lorcin Engineering, Davis Industries, and Bryco Arms, the



GUN-CONTROL LEGISLATION. LITIGATION. AN ANGRY PUBLIC. GUNMAKERS ARE FEELING THE HEAT. A CLOSE-UP LOOK AT THE SECRETIVE INDUSTRY

Cover Story

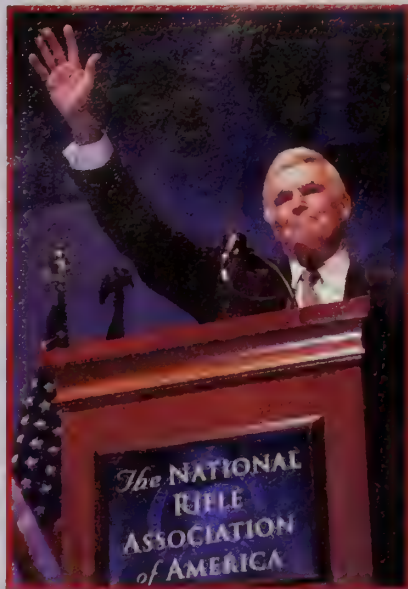
Brazilian handgun maker Forjas Taurus. Since George Washington established the Springfield (Mass.) Armory to defend the young republic has the American gun industry faced a serious crisis. Trouble looms on every front. Politically, companies are facing the prospect of a Big Tobacco-like loss of their power in Washington and clout with state legislatures, a development that could lead to tough new laws that aren't riddled with loopholes. While handgun control is still unlikely, measures that would make it harder for criminals to buy weapons at gun shows and limit the number of firearms purchased at one time seem more likely.

Now, gunmakers are facing an onslaught of lawsuits they barely afford to fight, much less lose. These cases are based on the controversial theory that manufacturers

A DIVIDED CAMP

Fearing for their survival, some of the oldest and largest gun manufacturers are beginning to break away from the NRA's hard line on handgun control.

THE HAWKS



HESTON:

The NRA isn't about to back down

LORCIN ENGINEERING

Headquartered in Southern California's Ring of Fire, Lorcin specializes in cheap Saturday night specials. Its top seller, the Lorcin .380, is consistently among the Bureau of Alcohol, Tobacco & Firearms' top 10 crime guns.

JENNINGS COMPANIES Bryco Arms, Davis Industries, and Phoenix Arms, Ring of Fire companies owned by relatives of distributor Bruce Jennings, all sell inexpensive handguns. Jennings is dead set against any concessions. If manufacturers were to give opponents what they ask, "about a year later, they'd be out of business," he says.



NAVEGAR Perhaps the most controversial gun manufacturer in the U.S., Miami-based Navegar produced the Tec-9 semiautomatic pistol used in the Littleton massacre. CEO Carlos Garcia (photo taken in 1989) has brazenly publicized the "excellent resistance to fingerprints" provided by the Tec-9's coating.

That's considered treachery by smaller players on West Coast, in Florida, and elsewhere. A few key members of each camp:

THE DOVES



S&W STORE: Diversifying into sporting togs

SMITH & WESSON A division of Britain's Tomkins, the largest U.S. producer of handguns. While Smith Wesson, like other manufacturers, has angered handgun-control advocates by selling easy-to-conceal pistols known as "pocket rockets," it was also among the first to ship child-safety locks with its products.



COLT'S MANUFACTURING Founded in 1836, the company whose .44-caliber revolver helped win the West is now trying to lessen its dependence on the types of guns typically used in crimes and is branching into new markets. President Steve Sliwa is promoting its prototype "smart gun" which can only be fired by the owner.

GLOCK The largest importer of handguns into the U.S., the Austrian company joined Smith & Wesson in preliminary peace talks in June with Philadelphia Mayor Edward Rendell, who launched one of the first municipal lawsuits against the industry.

West Coast wing of the industry tends to oppose any concessions at all (page 67).

Many foreign makers, such as Beretta and Forjas Taurus, are also taking a hard line. And given that imports account for about 30% of U.S. handgun sales, including key contracts with the U.S. military and many police departments, their views count. "At this point, we plan to settle this by winning these lawsuits," says

Cover Story

Jeff Reh, general counsel and vice-general manager of Beretta USA Corp. in Accokeek, Md.

BIG YEAR. Because nearly all of the major manufacturers are privately held and shrouded in secrecy, little is publicly known about their revenues, profits, lobbying, or other inner workings. But for at least a decade, the domestic firearms market, while highly cyclical, has been in a slow retreat, largely because of a decline in hunting. U.S. gun production peaked at 5.7 million guns in 1980; it averaged around 4 million units annually between 1995 and 1997, the most recent years for which federal

data are available. "We are a very mature industry, and all fighting for a very finite amount of business," says Mo

Despite its small size, the gun market is fiercely competitive. In 1997, Smith & Wesson, the leading handgun producer, grabbed just 19% of the handgun business. The five largest domestic producers split up 36% of the market, leaving a healthy 45% for imports and more than 40% for small producers. Such a crowded field means margins are low and profits modest. Sturm, Ruger & Co., the only handgun producer publicly listed in the U.S., earned just \$23 million in sales of \$212 million last year—and some of that stemmed from its \$67 million nongun businesses. And Ruger, be it or not, is considered among the most profitable. Colt's, which sank into bankruptcy in 1994, had profits of about \$6 million on sales of \$96 million last year. "This is not a business you want to get into if you want to make a lot of money," Elizabeth Saunders, owner and president of American Rifle Co., a small Waco (Tex.) producer of handguns, says.

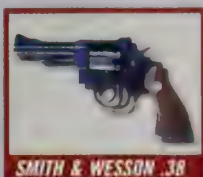
Ironically, 1999 is shaping up as a gangbuster year for the industry, being driven by prospects of harsher gun control

cerns that Y2K will prompt a societal breakdown. Problem many of these customers have their weapons, they aren't come back soon. Indeed, the history of the gun business has roller coaster, with peaks and fears of gun control. The last major mark, in 1993-94, is attributed to President Clinton's gun efforts. But that was followed by straight years of decline in production plunged over 30%. "This year will be a disaster," premier industry lobbyist Richard Lanza, who expects sales to drop at least a third.

QUALIZERS. Because of these prospects, the industry is desperately reaching out for new markets. It has heavily promoted cowboy shooting, in which participants appear in rodeo costumes and reenact scenes from the Wild West, replete with gunfire. It is also trying to lure more weapons to women. One pioneer was Derringer's Saunier, who in 1989 introduced the Lady Beretta, the first handgun designed for women. With such touches as a pink ivory handle and a burgundy case, it became an overnight sensation and spurred development of the Lady Colt and Lady Beretta. "Now women now account for about 10% of the gun market. Based on the fact that more people would buy guns if there were less danger of children accidentally misfiring, Colt's is also speeding ahead with development of smart guns, which can only be fired by the owner. Other companies are looking outside the gun market. For example, Smith & Wesson (Conn.)-based Ruger, for example, in 1994 diversified into making titanium golf club heads. Smith & Wesson has 100 stores in Springfield, Mass., and elsewhere to sell guns and clothing. Still other companies are trying to get into the business altogether. "It's no secret what's for sale in one industry executive. "Everything." But until the industry's political and legal woes ease up, no one is going to say, "Who would buy one of these businesses if you know your continuing liability?" says one New York investment banker.

THE CRIME WORLD'S WEAPONS OF CHOICE

Top guns traced to crimes in 1998



SMITH & WESSON .38



LORCIN .380

TYPE	NO. OF TRACES
SMITH & WESSON .38 PISTOL	8,096
LORCIN ENGINEERING .380 PISTOL	5,746
STURM RUGER 9mm PISTOL	4,594
RAVEN ARMS .25 PISTOL	4,520
NORTH CHINA IND. 7.62mm RIFLE	4,224
MOSSBERG 12-GAUGE SHOTGUN	3,970
SMITH & WESSON 9mm PISTOL	3,968
SMITH & WESSON .357 PISTOL	3,849
DAVIS INDUSTRIES .380 PISTOL	3,350
MARLIN .22 RIFLE	3,235

DATA: BUREAU OF ALCOHOL, TOBACCO & FIREARMS



MARLIN .22

How far will the legal and regulatory attack on the industry go? At this point it's hard to tell. In the past, the political clout of the NRA's 2.9 million members has always ensured that most federal gun regulations are shot through with loopholes. Manufacturers have managed to sidestep the 1994 assault-weapons ban, for example, by making minor design modifications on their weapons.

Now, Congress is working on gun-control measures again—but their outcome is far from clear. Senate and House lawmakers began meeting the first week of August to hammer out differences between their bills. The final measure, expected in the fall, likely will include criminal-background checks for purchasers at gun shows and flea markets and require that vendors verify their identities to gun-show promoters. Congress also will call on the Federal Trade Commission to study whether gun marketing illegally targets youngsters.

A much bigger threat to the industry comes from the 2000 Presidential race, in which Vice-President Al Gore and former Senator Bill Bradley have made gun control a key plank in their Democratic campaign platforms. Gore has responded to Bradley's sweeping proposal, calling for nationwide gun licensing, limiting gun purchases to one a month, and making trigger locks mandatory. Risk-

ing the key suburban swing vote, Bush has largely adopted the NRA line, supporting instant background checks for gun shows and stricter enforcement of existing laws (page 68).

The outcome of the lawsuits filed by cities is also hard to handicap. The cases are based on the innovative legal theory that the gunmakers are somehow responsible when a third party uses their product to maim or kill. How so? By allegedly distributing guns to people who the companies should know are likely to use them for criminal purposes. This argument is, at best, problematic. For starters, the gunmakers point out that most of them sell strictly to distributors and so don't come into contact with rogue dealers. But even assuming that wasn't the case, the manufacturers are still only suppliers. They don't pull the trigger. Thus, they

GUN RESTRICTIONS: WHAT'S ON THE TABLE

WAITING PERIOD Lawmakers want to close a loophole allowing firearms to be sold at gun shows without a criminal-background check on the buyer. The Senate has adopted a three-day waiting period and background check at gun shows. The House will push for weaker measures.

SALES AND REGISTRATION Vice-President Al Gore and former New Jersey Senator Bill Bradley would require all handgun owners to pass a basic safety course and be licensed before they could buy a handgun. Bradley also would seek to have privately owned guns registered with the government.

ENFORCEMENT Texas Governor George Bush and millionaire publisher Steve Forbes, who are vying for the GOP Presidential nomination, say what's needed is better enforcement of existing laws. The NRA agrees with them.

FEDERAL OVERSIGHT Some gun-control advocates want to subject guns to consumer-protection laws. That would mean that the government could order a recall of defective guns or fine a manufacturer for a product that doesn't meet minimum standards. Repeated attempts to bring guns under the purview of the Consumer Product Safety Commission have failed in Congress.

HOW ONE GUN GOT INTO THE WRONG HANDS

It's rare for gun manufacturers to market directly to consumers. Instead, firearms roll off the assembly line into a complex network of retail dealers, wholesale distributors, and lightly regulated gun shows. Here's the path authorities claim was allegedly taken by the Tec-9 used by the shooters in the massacre at a high school in Littleton, Colo., in May:



1 One of the most lethal firearms civilians can own, the Tec-9 was made by Navegar in Miami. The manufacture of the semi-automatic pistol was banned by Congress in 1994, but thousands remain in circulation.

2 The gun was sold about five years ago to Zanders Sporting Goods in Baldwin, Ill. Like most wholesalers, it offers a wide range of sporting equipment, from buck knives to shotguns to ammunition.



3 Next it traveled to Just Guns, a gun shop in Westminster, Colo. When the store went out of business last year, the weapon and other inventory passed to Jerry Russell, a creditor in suburban Denver.



4 Russell then sold the Tec-9 to 22-year-old Mark Manes, left, at the Tanner gun show in Denver last August. Such shows are largely exempt from gun-sale regulations.



5 Manes resold the Tec-9 for \$500 to Littleton shooters Eric Harris, left, and Dylan Klebold, right, whom he met through a common friend.

argue, they can't be held legally liable for any shooting deaths.

Still, the legal pressure on the industry intensified last February when a federal jury in Brooklyn, N. Y., in *Hamilton vs. Accu-tek* found 15 gun manufacturers responsible for negligent distribution. True, only three companies—including Beretta and Taurus—were ordered to pay damages. But it was the first time a jury had ever held the industry responsible for distribution practices.

The case featured testimony from Robert Hass, a former vice-president for marketing at Smith & Wesson, who claimed executives could have stemmed the underground distribution of guns in cities. He testified that manufacturers could easily cut off retailers that repeatedly make multiple sales of guns or have many crime guns traced to them, "in the same way a retailer would be cut off who broke price [agreements]." U.S. District Judge Jack B. Weinstein agreed and didn't mince words about the industry's responsibility. Concluded Weinstein: "It is the duty of manufacturers of a uniquely

hazardous product, designed to kill and wound human to take reasonable steps... at the point of sale to primary distributors" to prevent their misuse.

The manufacturers are appealing the verdict. Ultimate Harvard Law School Professor W. Kip Viscusi doesn't think the law is on the plaintiffs' side. But Viscusi, who watched tobacco litigation closely, warns that may not matter if you get enough of these claims lodged against you, "you need is one jury getting mad at you." In today's environment with mass shootings a regular affair, that hardly stretches. And given gun-industry finances, even one would be cause for panic.

NO LEADER. That's why gun companies may be willing to promise over their own distribution practices. It would make them much to weather a crackdown on abuses. National Shooting Sports Foundation. President Robert T. Delfay says criminal use of firearms accounts for "far less than the guns and ammunition sold. Already, many favor beefing up the chronically underfunded Bureau of Alcohol, Tobacco, and Firearms, which regulates gun sales. "These [rogue] retailers ought to be prosecuted and closed down, in capital le

Cover Story

ellay. "If that means the ATF needs more help, we need them more help." The NSSF also strongly backs mandatory background checks at gun shows—another big loophole. Given the gulf between the industry and its foes, settlement will be a tough slog. For starters, the plaintiffs yet coalesced enough to choose a leader with whom companies can negotiate, if they were so inclined. And tentative overtures, "it would be very difficult," says vowing the industry "absolutely will not agree to any settlement." Meanwhile, the NRA has already got states to pass laws preempting local government suits to double the number next year. The challenge of making peace with handgun-control advo-

cates will be made more difficult by the deep split between the main-line companies and militant newcomers. The industry is dominated by the older companies, such as Smith & Wesson, Remington, and Mossberg, that have long stressed safety in sober marketing campaigns. But that image has been undercut by mavericks such as Miami-based Navegar, best known for its Tec-9 assault pistol, and W.S. Daniel, which offers Full Metal Jacket and Streetsweeper models, drawing howls from gun-control activists. Not only do these companies not belong to the NSSF, they have even been banned from showing some of their guns—and their provocative ads—at the NSSF's Shot Show in Atlanta, the world's largest gun trade fair.

Now, things are looking grim for the upstart makers of

NO SURRENDER FROM MR. SATURDAY NIGHT SPECIAL

While America's East Coast firearms Establishment is starting to break away from National Rifle Assn.'s hard line on gun control, one segment of the industry is unlikely ever to accept compromise. Says Bruce L. Jennings: "There will not be any concessions from the West Coast people."

Jennings should know. He has long served as an unofficial spokesman for a feisty group of in-your-face upstarts, many of whom were started and run by members of his family. These outfits, which include Phoenix Arms, Davis Industries, and Ring of Fire Engineering, and so on, are often referred to as the Ring of Fire companies because they are based in the suburbs encircling Los Angeles. Their specialty: churning out easily concealed, small-caliber weapons at prices ranging around \$50. Jennings calls them "affordable" guns. Law enforcement officials call them "junk guns," or "Saturday night specials."

OPENING. This maverick wing of the gun industry got its start in the wake of the 1968 Gun Control Act, which included measures to restrict expensive European imports by establishing quality and safety benchmarks. Jennings' late father, George, seized an opportunity for a domestic manufacturer to make the same kind of weapons. In 1970, George Jennings converted his California-based machine shop, which had made tools for the aerospace industry, to produce an inexpensive .25 caliber

pistol of his own design, the Raven. The little gun was a hit—and quickly spawned many imitators.

Bruce Jennings, a onetime gunmaker who now owns a gun distributorship in Nevada, sees himself and the California manufacturers he represents as apart from the mainstream

tiations with gun-control forces as unproductive at best and traitorous at worst. Measures such as limiting buyers to one purchase a month or imposing a three- to five-day waiting period before a gun can be purchased are aimed at shutting down gun shows, he says. And without gun

shows, there would be no gun collectors. "It would be just like shutting down doll shows," he says. "Having a doll collection would be meaningless because there'd be no way to buy or sell them."

TIME OUT? Bankruptcy is the likely way many of the West Coast companies will deal with any litigation. "It doesn't mean they'll be gone forever," Jennings says. "They can file for bankruptcy, dissolve, go away until the litigation passes by, then reform and build guns to the new standard—if there is a new standard." Lorcin and Davis have already filed for bankruptcy.

This strategy may be ethically questionable, but

there's a certain logic to a bankruptcy game plan. It would avoid or reduce any potential settlement costs with the cities and private plaintiffs that have sued the industry, not to mention millions of dollars in attorney's fees. More important, the move would consolidate all the municipal lawsuits under local bankruptcy judges, who are apt to be more lenient than juries.

Authorities have tried to rein in the Ring of Fire before. If Jennings has his way, they'll be no more successful this time.

*By Larry Armstrong
in Los Angeles*



BRUCE JENNINGS

One plan would have the Ring of Fire gunmakers file for bankruptcy and let things blow over

companies. None of the West Coast companies belongs to the National Shooting Sports Federation, a major industry group that boasts 1,600 members, including 400 makers.

Nor are the Ring of Fire companies sought after to join up. Because they cater unabashedly to their price-conscious customers, the hawkish companies can be "their own worst enemies [whose] marketing reinforces the impression they are targeting the criminal element," says Robert T. Delfay, president of the National Shooting Sports Foundation.

Jennings dismisses any peace nego-

cheaper weapons. Since 1994, Navegar's production has plunged over 60%. In the same period, output at the Ring of Fire companies—including Lorcin, Davis, and Bryco—has dropped 75%, says Garen J. Wintemute, who has long studied

them as director of the Violence Prevention Research Program at the University of California at Davis. California, meanwhile, is soon expected to approve tougher standards for guns made or sold in the state. The bill "would outlaw most of the guns made by these companies," says Wintemute.

Cover Story

The future has never been more uncertain for America's

oldest manufacturing industry. Feldman, the former try lobbyist, figures it's now conceivable that "the handguns could be outlawed." Asked if he was worried about such a threat, Stephen Sanetti, Sturm Ruger's general counsel, concedes that this is a national "cultural divide." Adds Sanetti, fatalistically: "If the will of the people tighten up on gun laws, then so be it. If the law is changed, we will follow the law." It isn't the kind of deflection you might expect from a gun executive. But a realistic admission that this business has lost much of its future.

By William C. Symonds in Boston and Lorraine Woellert in Washington, with bureau reports

FLASH POINT ON THE ROAD TO THE WHITE HOUSE

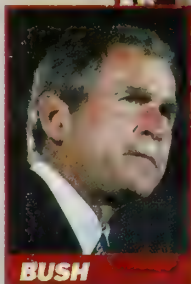
They were gleeful over at the Democratic National Committee on July 23. That's when Richard E. Dyke, Maine finance chairman for Texas Governor George W. Bush's Presidential bid, abruptly resigned after reporters began quizzing him about his business dealings. Dyke's company, Bushmaster Firearms Inc., is notorious for using loopholes to sidestep a 1994 federal ban on assault rifles. To avoid a furor, Dyke stepped down.

It was another casualty in the political gun wars. The fuss didn't give much pause to the Bush juggernaut, but it gave Democrats an early chance to use the Texan's gun record as target practice for Campaign 2000. As the public recoils from a new wave of gun violence, tougher gun laws could become a centerpiece of the political debate this election season.

Millions of votes may be in play, especially those of women. In mid-July, more than 60% of women polled by the nonpartisan Pew Research Center said a member of Congress who had voted against gun control didn't deserve reelection. The Pew poll found that voters of nearly all stripes favor gun control: Minorities, college grads, the elderly, and those making more than \$75,000 a year are more likely to oppose a



LAS VEGAS GUN SHOW



BUSH

Bush's pro-gun views could hurt him in the long run

pro-gun candidate. Says Pew Director Andrew Kohut: "The best one can do if one is an opponent of gun control is hope the issue doesn't come up."

Not a chance. Gore already is exploiting what he sees as a vulnerability in Bush's otherwise unflappable campaign. In May, Gore cast a dramatic tie-breaking vote to pass a Senate measure that would require background checks for people buying weapons at gun shows. On July 12, he followed up with a plan that calls for a three-day waiting period, a ban on "junk" guns commonly used in crimes, mandatory trigger locks, stiffer penalties for illegal sales, and a national licensing system.

NARROW LINE. In contrast, Bush has signed bills that make it easier to legally carry concealed weapons and tougher for localities to sue gunmakers. The "compassionate conservative" echoes the National Rifle Assn. refrain: Better enforcement of existing laws, not new rules, is the answer to crime. Yet even Bush is quick to boast of gun-control measures he has enacted—including tougher penalties for selling guns to kids—and his support of instant

background checks at gun shows.

He's walking a narrow line. To appeal to conservatives in primary states, Bush must stress his pro-gun bona fides. But that could cost him in the general election. Hard-liners are ready to detect some waffling. Larry Pratt, executive director of the ultraconservative

Gun Owners of America, fears Bush will wobble out. "He seems to be trying to avoid, definitionally," Pratt fumes.

Pro-gun folks argue that fall from gun violence can actually cut both ways. After all, NRA membership and donations spiked 20% after the Littleton massacre.

And the NRA victory this spring when the House killed a Clinton proposal to clamp down on gun-show sales.

Still, that win might be the last for a while. On July 30, the House backpedaled from its earlier hard line and told conferees to accept gun show background checks in talks with the Senate on a final bill. As such, Democrats are convinced they have found a wedge issue that could help them retain the White House and maybe even regain the House. The GOP worries that they may be right.

By Lorraine Woellert in Washington, with Richard S. Dunham in Austin, Tex.



GORE

Democrats are confident they have a defining issue

he images are graphic, heart-rending, and all too familiar. The victims' bodies. The grainy photo of the killer. The funerals, weeping survivors. The drama of the Atlanta massacre perpetrated by a disgruntled day trader who set himself out endlessly on the television screens of America. But there's something that Americans don't forget. The rest of the world is watching, too, and wondering what kind of a model America really is.

3 Americans debate renewed passion pros and cons of gun control, they should remember what an impact issue has overseas. Foreign countries love things American. transoceanic tri- of American mar- g icons such as . Coke, and Levi's is ar stuff. Of more at vintage and far significant is the ual, grudging adop- of America's eco- icons. It involves ull range of share- er rights, individual- and the energizing, formative power of free mar- No country has swallowed this rican model whole, and many gn leaders are still opposed to it it's fair to say that the oric of American economic free- is asserting a greater pull over- than it ever has done before. vision of capitalism's benefits is of the great American psycho- al exports.

sion with open markets and personal freedoms can have a deadly by-product that no self-respecting Frenchman or Japanese would ever want in his land. And if the American way can be fatal, why adopt any part of the American way at all?

Sure, such sentiments may be grossly unfair and simplistic. For starters, Europeans and Asians often love the graphic cinematic vio-

criticism of the trial of ex-Deputy Prime Minister Anwar Ibrahim, wondered why anyone would listen to these objections, considering where they came from. "In the U.S., there are as many guns as there are 7-Eleven outlets," he quipped, adding that possession of illegal firearms can earn you the death penalty in Malaysia.



BLOODY COVERAGE. The stakes get much bigger when you look at Japan and Europe. There are vital U.S. economic interests in seeing these trading partners embrace globalization. Yet in Tokyo, the more ghastly U.S. crime stories get more media coverage than the news of America's record gross domestic product. It's small wonder, then, that the most conservative elements of Japanese society are ambivalent about U.S.-style reform. "We want to change, but not to the winner-take-all American system," says one insider at the Finance Ministry. That's the type of system, in the eyes of many Japanese, that also unleashes violence indiscriminately.



JOHN TRAVOLTA IN PULP FICTION

The outcome of the gun debate could help determine how the world accepts the U.S. model

lence that Hollywood projects on screens around the world. And despite the horrifying events in Atlanta, crime rates in America have actually fallen to 1973 levels, gun control or no gun control. The long economic expansion delivered by free markets has helped drive those crime rates down. Meanwhile, crime is rising in Europe and Japan, although to nowhere near U.S. levels.

But in the electronic echo chamber of the global mass media, such rational arguments easily crumble before the repeated images of real-world American violence. The horror those images provoke feeds the latent fear and resentment of America that exists in many quarters of the world.

Many leaders hostile to U. S. influence are ready to exploit that fear. In Malaysia, one writer in the *New Sunday Times*, deflecting U. S.

The truth is, many people overseas think there is something a bit off in the U. S. circa 1999. Yes, the U.S. economy has had a terrific run. But that doesn't expunge the revolution at the permissive U.S. gun laws that allow deranged individuals to kill innocents. It's time for Americans, regardless of their political persuasion on gun control, to take into account how the world sees them. Europeans and Asians know they are going to have to accept American influence. But they want that influence to be as sane and helpful as possible, and they have every right to think that way. It's only natural that the tenor of the ongoing gun-control debate will have a strong effect on the American image abroad.

Bremner writes about Asia's economies from Tokyo.

COMMENTARY

By Wendy Zellner

EARTH TO HERB: PICK A CO-PILOT



At a press conference following Southwest Airlines Co.'s annual meeting in May, Chief Executive Herbert D. Kelleher pulled out his usual comedy routine when questions turned to succession. Asked about a failed shareholder proposal complaining about "one-man rule," the 68-year-old Kelleher joked: "Just the other day, I said to myself, 'Herb, as chairman, are you satisfied with the results of Southwest Airlines?' And the response I gave myself was, 'Well, Herb, as president, I think you ought to be complimented for the outstanding job you have done.' And then in my third capacity, I said, 'As CEO, Herb, I want you to know that both the president and chairman are proud of what you have accomplished.'"

Hardly an arms-length evaluation. But many observers would be inclined to agree. For most of Southwest's 28 years, the Wild Turkey-gulping, chain-smoking, Elvis-impersonating Kelleher has made precious few missteps in building one of the most profitable and admired airlines, now a model for low-fare carriers around the globe. But for all of his success, Kelleher's toughest challenge may lie ahead: handing over the controls in the right way, at the right time, to the right person.

DISQUIETING. Making sure that happens is, of course, the job of Southwest's board. But some investors, former employees, and other observers find it disquieting that there's no obvious successor and no visible sign of anyone being groomed for the top job. "I would prefer to see a succession plan spelled out," says senior analyst Steven J. Colbert of Jurika & Voyles Inc., an investment firm that holds nearly 3 million Southwest shares.

The company's mostly longtime directors are clearly taking their cues

from the chairman. The Southwest board has no committee to regularly monitor and review succession plans, as corporate governance experts recommend. There is apparently little substantive contact between directors and most of the senior managers under Kelleher. Company co-founder and director Rollin W. King says the board "never has" discussed succession without Kelleher present, another practice advised by the experts. The hyperkinetic Kelleher shows

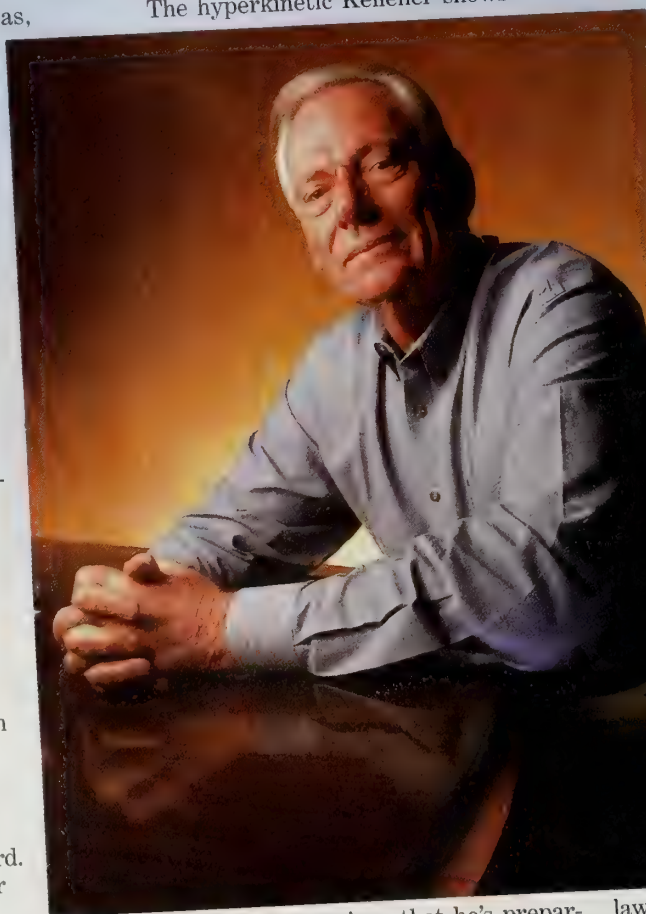
risen 144% in the past three years, compared with 68% for the American Stock Exchange's airlines index. It has fallen 18% since late July as fuel prices and Southwest missed second-quarter earnings expectations by a penny.

Indeed, Kelleher and board members have insisted for years that they have a solid executive team in place that won't miss a beat whenever

Kelleher departs. But it's Kelleher's larger-than-life persona and his embodiment of Southwest's hard-driving entrepreneurial spirit that make planning for his eventual successor so difficult. While he has delegated much of the day-to-day running of the line, Kelleher is still the master strategist and primary spokesman in Washington on Wall Street.

BOARD IS MUM. This is a particularly touchy topic at a company where the CEO regularly jokes that he's immortal. The normally voluble Kelleher doesn't like to discuss succession himself and was not able to comment for this article. All six of the eight outside directors reached by *BUSINESS WEEK* refused to talk about the details of the company's succession planning. But one director said they saw no need to make Kelleher's heir apparent. "Anytime you have a successor, you've got two other executives [mad, and that's others quit," says Travis Johnson, an El Paso (Texas) lawyer and director for 21 years.

Directors insist there is a succession plan that's reviewed at least a year. Yet it doesn't seem to have provided much clarity. Asked about their contingency plans if Kelleher should exit tomorrow, two directors said they don't know who would take his place; two others said a successor has been identified. And it appears that Kelleher, not the board, is controlling this process. "If Herb won



LARGER THAN LIFE: Kelleher is the embodiment of Southwest's hard-driving spirit

no signs that he's preparing to retire, and certainly no one is asking this madcap maestro to leave the stage. Who can argue with the airline's industry-leading profit margins, and its history of peaceful labor relations in a business infamous for strife? Profits this year are expected to jump 18%, to \$510 million, on revenues of \$4.75 billion. The stock has



contract a terminal illness and knew he had six months to live, I'm sure when the time came that he thought he needed to get down, we'd probably accept his judgment as to who should succeed him. He knows better than we," says E. Barshop, the former CEO of Delta Inns and a Southwest director for 24 years.

Should it be? Governance experts warn that allowing an incumbent boss to simply present his choice to a compliant board is an antiquated—and ill-conceived—approach to choosing a successor. Even the best CEO may not see the flaws in favored candidates or be partial to one with a similar leadership style. Also, strong executives are not necessarily good at recognizing when it's time to hang up their hats. "Companies in general [handle succession] very badly. The single most important function of the board of directors," says shareholder activist Nell Mitchell, principal of the Lens Fund, is to be a member of a commission on succession for the National Association of Corporate Directors. But certainly many successors will recommend their replacements, a growing number of whom today are moving to ensure that they are actively involved in a search. After all, that's the only way to make an informed choice.

THE DIFFERENCE. At General Electric Co., for example, CEO John F. Welch asks each of his potential successors to make frequent presentations to the board. He has also asked directors to spend time in the field with each of the candidates—without presenting.

At a company and its CEO are both out who's next in line, the transition tends to be smoother.

Roberto C. Goizueta at Coca-Cola, Sam Walton at Wal-Mart

Stores, and Andrew S. Grove at Intel come to mind. All clearly signaled who their successors would be well before they gave up the CEO title or died. Says one veteran airline industry executive: "Herb has to start now identifying and building up the stature of his successor. He has got to bless the difference in style that will inevitably come with a new person."

Such advance notice to employees and investors is critical for someone following in the footsteps of a legend.

as homogeneous as Southwest, the internal solution is the only solution," says Michael J. Bell, head of the global aviation practice at search firm Spencer Stuart.

That leaves a short list of insiders who have been thoroughly overshadowed by their flamboyant boss. Included are the three executive vice-presidents, Colleen C. Barrett, who oversees customer relations; Chief of Operations James C. Wimberly; and corporate services chief John G. Denison. Below them are Chief Financial Officer Gary C. Kelly, General Counsel James F. Parker, and Vice-President for Government Affairs Ron Ricks. Barrett, 54, Kelleher's most trusted adviser, already has said she does not want the top job.

"IRRESPONSIBLE." Former Southwest insiders say most of those top executives have little exposure to the board either, with the exception of Barrett and Kelly. King says all have appeared before the board, but couldn't say how often. "Frankly, it would be almost irresponsible of us to try to make an independent decision based on the exposure that the board could get to one of these people," he says.

One of Kelleher's signal achievements was to entrench Southwest's low-cost, short-haul formula so thoroughly that many believe it could survive under anyone's command. Former Southwest CEO Howard D. Putnam, who left in '81, recalls the words of Lamar Muse, the company's first chief: "Only an idiot could

screw up Southwest Airlines." Maybe. But a great company can surely lose its way under weak leaders. Like it or not, Kelleher and his board will someday have to face his mortality. The question is whether they're doing everything they can today to make that eventuality less painful for employees and shareholders alike.

Bureau Chief Zellner covers the airline industry from Dallas.

WHO'S IN THE WINGS AT SOUTHWEST? WHO KNOWS?

A DOMINANT CEO...

Herb Kelleher, 68, holds the top three positions at Southwest—chairman, CEO, and president—and he also represents the company on Wall Street, in Washington, and to the board.

...AND A SUBMISSIVE BOARD...

Directors rarely meet with inside candidates, don't have a permanent succession-planning committee, and don't talk about the issue unless Kelleher is around.

...CLOUD THE SUCCESSION PICTURE

Most inside candidates are virtually unknown to outsiders. Front-runners include James C. Wimberly, 46, executive vice-president and chief operations officer; John G. Denison, 54, executive vice-president for corporate services; James F. Parker, 52, general counsel; and Gary C. Kelly, 44, chief financial officer.

Just ask David D. Glass, who succeeded the beloved Walton. "The one thing that benefited me the most is that everyone inside and outside the company knew that I was going to be CEO because Sam had chosen me to be the CEO," says Glass, a low-key finance man who became president in 1984 and CEO in 1988; four years before Walton died.

Observers would be shocked if Southwest picked its next chief executive from outside. "For a company

'I'M WORKING MY TAIL OFF TO FIX IT'

New Manpower CEO Joerres is looking for a quick turnaround

You'd think it would be a great time to take charge of a giant temporary services company. The U.S. economy continues to muscle forward. With qualified workers desperately scarce, plenty of companies are turning to temps to fill in the gaps. The Internet is making it easier than ever to search for job candidates. And in high-demand fields such as technology, a whole new specialty has arisen to provide the skilled workers who've made a way of life out of moving from one contract job to the next.

But three months into his tenure as the new CEO of Manpower Inc., Jeffrey A. Joerres faces anything but a cakewalk. The Milwaukee-based company—until last year the world's largest temporary staffing company—seems to have lost its moorings. Profits have stagnated, owing to high overhead, too many low-margin contracts, and problems in its key French unit. Nor has Manpower, which gets 90% of its revenues placing temps in light industry and office jobs, taken full advantage of the demand for technical workers or the rise of the Net.

STREET SMARTS. All this helped 23-year CEO and Chairman Mitchell S. Fromstein—an industry icon who brought benefits and training to temps—decide to step down last April. Now, Joerres, a 39-year-old former IBMer and seven-year Manpower vet, has his work cut out for him. He must “remake a company more intent on revenue and market share than on profits, return on capital, and margins,” says Adam Waldo of Credit Suisse First Boston.

The amiable Joerres, a native of Milwaukee's tough South Side and the first member of his family to attend college, was a bit of a dark-horse

candidate for the top job. He ascended after expected successor and CFO Jon F. Chait resigned last July in a tussle with Fromstein. The board has brought in John R. Walter as nonexecutive chairman to provide support. It's his first major role since winning—and losing—the heir apparent spot at AT&T in 1997.

Joerres is the first to admit he faces a

host of hurdles. Manpower's earnings of \$133 million on revenues of \$8.8 billion last year—have been virtually flat for three of the past four years. That's partly because of rising costs following an ill-fated attempt to gain share. Manpower took on too many low-margin contracts in the U.S. and France, markets that make up two-thirds of sales. Complicating matters was a glitch-filled implementation of a computer system meant to link back-front offices, customers, and employees. Overruns led to a \$57 million write-down last year. In the chaos, Manpower lost its No. 1 spot to Swiss rival Adecco.

TAKEOVER TALK. Investors aren't giving Joerres much of a breather. The stock has sunk to around 22%, less than half its August, 1997, peak of 50%. Whether the current management fixes

they look outside for new managers, or the company gets required,” says Anthony Spare, chairman of money manager Spare, Kaplan, Bische Associates, which owns 45% of Manpower shares. Joerres concedes that the low stock price

make the company vulnerable to a takeover. “I'm working my tail off to fix it,” he says.

Certainly, Joerres is full of big ideas, starting with plans to target more profitable markets such as technology, where Manpower supplies everything from programmers to high-paid desktop support staff, though Joerres himself hopes to build the \$800 million professional services unit—now a loss-making unit—now a source of sales—he says Manpower should have paid more attention to it in the past.

That was particularly true in France, Manpower's largest market, where profits fell last year, in part because of tax law changes. As one former Manpower executive put it, “If you supply illiterate sweepers to the Paris market, you're going to have trouble getting IT people to work for you.” One potential obstacle is Michael Grunelius, 70, a Frenchman who has run the French unit for 42 years and has no plans to retire. But Joerres says he'll have new



REINVIGORATING MANPOWER

CEO Joerres has big plans for the company

CHALLENGE

- Labor shortage makes temps hard to find
- Depressed stock has frustrated shareholders
- Online job sites threaten traditional recruiters

PROPOSED SOLUTION

- Target new communities such as disabled workers
- Boost IT temp business, perhaps spin off the unit
- Build out Web site; partner with online companies

**Computer gremlins mangle and abuse
yet another email attachment.**



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ership there within 12 to 18 months.

Back home, Joerres has introduced an ambitious plan to boost Manpower's IT recruiting from 18% to 33% of U.S. revenues in two years. He wants to run the \$430 million business as a separate unit and make acquisitions at home and abroad. He's also launching a tech skills training and internship program at dozens of U.S. high schools to train more potential temps.

It's a start, but Joerres has a long way to go to make Manpower truly tech-savvy. At a time when Web sites such as Monster.com are taking the middlemen out of the job market, the company is just beginning to recruit via the Internet. A casual look at Manpower's Web offerings leads John Sviokla of Chicago-based consultants Diamond Technology Partners Inc. to snap: "It looks like the Stone Age."

Stay tuned, says Joerres, who is starting online tech training courses and boosting Manpower's listings on Monster.com. He also hints at building a job portal or taking a stake in a Web company. Down the line, says James J. Treacy, chief operating officer of Monster.com's parent TMP Worldwide, Manpower could find a role by marrying job listings with its expertise in interviewing and training.

NATIVE APPEAL. Still, Joerres can't ignore his bread-and-butter staffing needs. One ironic consequence of the economic boom: It's as tough for temp agencies to find people as for other companies. In the halcyon days of the early 1990s, with unemployment at 5% or so, "we could all look like geniuses," says Raymond Marcy, chairman and CEO of rival Interim Services Inc. "That era is over."

So Joerres is turning over every stone to pull more workers into the labor force. He is targeting Native American groups and the disabled. He also aims to expand a program now in inner-city Detroit churches, where Management pays the churches to spread its word. And to rev up execs, Joerres is tying pay to an array of financial returns.

Will Joerres' new game plan be enough? Many believe he's starting to get the company in line. "He has a real focus on improving shareholder value," says one of Manpower's largest shareholders. And John C. Steele, group personnel director of British Telecommunications PLC, a large Manpower account that shifted some business to rivals, came away impressed after a recent meeting. "He realizes he has to get people satisfied that the business can run properly before he can put in place a longer-term strategy," says Steele. What's not clear is whether Joerres has enough time to do both.

By Richard A. Melcher in Milwaukee, with Carol Matlack in Paris

Information Technology

A STERN EYE
Chairman Ellison
aims to make
Oracle a shining
example of an E-
business by the
end of 2000

E-COMMERCE

ORACLE: PRACTICING WHAT IT PREACHES

Now, it's not just selling Webware—it's using it

When it came to the day-to-day operations of Oracle Corp., founder and Chairman Lawrence J. Ellison wasn't showing much interest. If he wasn't masterminding some dramatic new software strategy, he was off pushing the limits of man and machine on his 80-foot racing sailboat, Sayonara. And his evenings? They were spent gazing at the cherry blossoms that blew from his lush backyard Japanese garden into his teahouse. Those were Ellison's passions.

That is, until this past April. That's when, for the first time in years, Ellison took an active role in the annual budget meetings at the Redwood Shores, Calif., company. Perhaps he should have tuned in sooner. Sure, nine of the

top 10 corporate Web sites were Oracle's database or financial software. The foundation for creating E-commerce Web sites. But what the outside world didn't see was that Oracle, the second-largest independent software company, was in near-chaos.

Embarrassingly, the cause of the problem was poor use of technology—Oracle's own. The company was still running older, non-Net versions of its software. Even though Oracle sang the praises of centralized management of corporate data, it had its financial and human resources information scattered across the world on more than 70 computing systems. It couldn't easily communicate one another. The result: Execs couldn't quickly find

**INFO
TECH
100
COMPANY**



...ic things as how many employ-
...ad or how many copies of its
...had been sold in the past week.
...NGS. Today, the E-engineering
...le is Ellison's newest passion.
...ordered his managers to radi-
...wamp the way they use comput-
...the Internet. His deadline: The
...000. The biggest single initiative
...idating all of the company's vital
...ing systems from more than 40
...nters around the world—includ-
...cial info, human resources, and
...into two locations. Oracle has
...outine jobs like travel planning
...ense reports online. Ellison has
...ed about 300 positions and ex-
...transfer people from obsolete
...to consulting or sales. Total pro-
...savings: \$1 billion a year.

At the same time, the company will adopt its own software to automate and integrate its sales force, Web site, and marketing operations. And it's launching a new Internet store linked with the sales force that will computerize routine tasks like letting customers update their contracts. That should free salespeople to target new accounts. The company hopes its online store will eventually increase database sales alone by 10% to 15% a year.

It's benefits like these that Oracle hopes to not only enjoy but to show off to potential customers. In the past, Oracle preached to buyers the benefits of using its software to streamline operations, boost revenues, and take full advantage of the Net's reach. Yet it had to point to other companies—such as Cisco Systems Inc.—as glowing examples of how it's done. "We can't sell this and not use it. This is ridiculous," says an exasperated Ellison. "We are supposed to be selling the technology to help customers become an E-business, but we're not an E-business. This is just not credible."

Oracle's struggles show just how hard

it is for companies to get beyond the rhetoric of E-business and actually do something about it. This overhaul also provides a checklist for all sorts of businesses undertaking the same sort of wrenching transformation. First on that list: anticipate hiccups. While E-engineering can bring a huge savings in cost and time, it can also bring turmoil and resistance. For example, Weyerhaeuser Corp.'s efforts to re-engineer its door-building operations have taken four years to get right, while costing four times its initial \$2 million investment.

MIDNIGHT OIL For Ellison, E-engineering may prove to be just as tricky. Perhaps that's why he's tackling it personally. Employees say Ellison is plugged in as never before. Phone calls before 9 a.m. are now common from the normally late-rising CEO. And he's asking people to defend their usefulness to the company. Ellison says he has three questions for his employees: "Are you building our products? Are you servicing our products? Are you selling our products? If the answer is no, no, and no—tell me again very slowly what it is you do? We are going to try to automate you away."

Even President Raymond J. Lane feels the pressure. For the first time in

his seven years at Oracle, Lane—who oversees daily operations—feels as if he has a boss. "It's healthy to have somebody scrutinize," says Lane. "It may feel nice to not have a boss, but it is not good for the shareholders."

Ellison has made four executives responsible for turning Oracle into an E-business. Vice-President Gary Roberts is in charge of technology purchases and consolidating the data centers. And three managers are supposed to ensure Oracle is making more effective use of the products they're developing: Senior Vice-President Ronald A. Wohl for corporate applications, Senior Vice-President Mark Barnechea for customer-relationship software, and Executive Vice-President Gary L. Bloom for Oracle's core databases. Ellison hopes to create a feedback loop between the people inside the company who are using its prod-

ORACLE®

How Oracle Corp. Is Harnessing the Web

CENTRAL COMPUTER OPERATIONS The company is shuttering close to 40 data-processing centers worldwide and placing its financial and human-resources systems in just two locations—all accessible via a corporate intranet. **Result:** Expected savings of tens of millions of dollars a year.

SALES AUTOMATION SOFTWARE Oracle will begin using its new customer-relationship management software to track field sales, customer service, online sales, and marketing. **Result:** It expects to get a better grip on what customers have purchased and what quarterly earnings will be.

ONLINE SOFTWARE SALES The company will funnel all of its sales through its online storefront. **Result:** Since many customers will order software directly, salespeople, who will get credit for online orders, will have more time to focus on new accounts and complex orders.

ONLINE EXPENSE REPORTS Oracle now requires employees to file their expense reports electronically. **Result:** With online approvals and no paper to shuffle around, turnaround time has improved from two months to four days.

One problem: Standardized online sales may mean no breaks for smaller customers

ucts and the people who are creating the products.

There's no doubt Oracle needed these jolting changes. Because the company didn't link its sales data to marketing activities, it had no way of quickly evaluating the effectiveness of a marketing program. It took, for example, two years to learn that the company's Safe Switch program—which encouraged corporations to move from competitors' databases—had been a roaring success. Had Oracle known earlier, it would have put even more resources into it. "We have been like blind people behind the wheel of a car speeding down a highway," says Mark Jarvis, senior vice-president for worldwide marketing.

SHARING AN EDGE. Oracle hopes to fix that problem by quickly adopting its own customer-relationship management software. That's a suite of programs that links data about customers' direct purchases and service records with marketing plans and information about orders processed through Web stores. On June 7, the CRM software was handed out to 4,000 of Oracle's U.S. salespeople, marking the first time the company's sales force has been required to enter detailed customer data into a centralized system accessible to any Oracle executive or salesperson. This move helps Oracle catch up with archrival Microsoft Corp., which on June 23 announced it will roll out a second generation of similar software for its 12,000 salespeople.

In the past, it took two weeks for top Oracle executives to see mere summaries of sales reports—often too late to do anything about it. Now they can log on, look at the latest detailed reports, and take action. Last month, for instance, Lane noticed that the U.S. sales forecast had dropped by \$3.5 million. He quickly drilled down into the data and found out which customer had changed its purchasing plans. After talking to a sales rep, he contacted the customer and helped negotiate a deal. The whole process took just 24 hours.

The new software makes team players of Oracle salespeople, too. In the past, they were reluctant to share information about customers for fear that they would become expendable. But now they're gaining invaluable information that helps them pitch to customers and close sales. Vicki Ross, a

sales manager in Seattle, says she's able to initiate a sales call knowing almost as much about the customer's technology needs as the customer does. The system even helps her keep track of her commissions—an incentive to close more sales.

Oracle expects its sales force to be even more efficient since its online store opened in July. The store enables customers to purchase software upgrades or add extra users to their license without having to call a salesperson. That



KEEPING TRACK

It used to take weeks to get sales numbers. Now VP Mark Barrenechea is installing Oracle software that offers real-time data

way, reps can spend their time cultivating new customers.

Oracle already is reaping measurable benefits. For example, it has done away with its paper-based expense reporting system, opting instead to have employees file everything electronically across the company's computer network. The result: Instead of an eight-week turnaround time on getting paid, Oracle reimburses its employees in four days.

While the potential rewards of transforming the business are great, the challenges can't be overlooked. Right

off the bat, Ellison ran into resistance from some European-based executives who were afraid of losing control over how they run their businesses. Ellison offered a choice. They could stick with the current systems and pay for them on their own, or they could go to a centralized computing services for Oracle. Ellison pointed out that their profit margins and bonuses—were at stake. Now they are beating down doors as fast as they can to get on the system as fast as they can, Ellison says.

NO DEALS. There are external challenges, too. Oracle risks irking customers. The sales-system overhaul changes the way the company negotiates prices and other terms. Instead of sales reps cutting practically anywhere they can to make quota, Oracle is imposing standard contracts with volume-based discounts. And since all the pricing and order information is online and can be readily analyzed, it will be easier for a salesperson to break the rules.

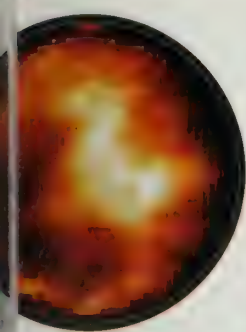
Already, some customers are nervous about the new system. Alan Hirsch, chief technology officer at Web-based peer Onsale Inc., says that his company got great prices even when it was small—and that was an important part of its ability to afford Oracle data. Now that price-haggling has been purged from the system, he's concerned that prices may simply be too high. "I think the move to a more standardized contract makes lots of sense, especially since the negotiations with Oracle have been tense in the past," says Hirsch. "But I hope that Oracle will provide software fairly from the start."

Can Ellison pull this off? It's not sailing ahead. After all, this is the first time the company has ever tried to control its growth in expenses. Still, if Ellison can get the job done, it's Ellison's analyst Neil J. Herman of Smith Barney. "Hey, what they're doing is just good business," says Herman. "Larry is a great motivator."

Ellison doesn't plan on being much of a bean counter for himself, though—it's just not his style. He goes as planned, he'll be able to concentrate on smelling the cherry blossoms by the time workers finish his replica Japanese palace in Woodside, Calif., two years from now.

By Michael
in Redwood Shores

LYN L. WRIGHT



SEA

PARADISE

THE VOYAGER SPACE-
craft by Saturn's largest
moon, Titan, in 1980, it saw
a world with a thick, yellow-
brown hydrocarbon
atmosphere and little else. Now,
scientists at the Keck Ob-
servatory in Hawaii have
managed to peer through Ti-
tanic haze. Using a computer
image, they've revealed hun-
dreds of millimeter-scale
features, they fil-
tered out the atmospheric
haze to reveal a com-
plexly textured surface that may
be the solar system's only
terrestrial oceans.

Terrestrial oceans wouldn't be
made of water but with liq-
uid hydrocarbons. Scientists
think that at Titan's surface
temperature, -290F, smog
condenses and falls as a
black rain. Claire Max,
a physicist at Lawrence
Berkeley National Labora-
tory, collaborated on the
study. She suggests that the rain
flows into highlands—the
dark areas in the image—
and down the hillsides to
a dark, oily sea.

Max says that, except for
the tremendous cold, condi-
tions on Titan are probably
similar to those that
existed on Earth just be-
fore life began. But it's un-
clear whether bacteria could
survive the frigid seas. A
probe to be launched from
the European Space Agency's
Venus Express spacecraft onto
the surface in 2004 should
provide a bit more about
this mysterious moon.

LEVITATION: IT'S ALL IN THE FINGERS

LEVITATION ISN'T JUST FOR
magicians anymore. Physi-
cists at the University of Nij-
megen in the Netherlands
have discovered that they
can make a magnet float in
space using nothing more
than another strong magnet
and their fingertips.

Scientists have known
since 1845 that levitation
using magnets alone is
physically impossible. Try-
ing to balance one magnet
on top of the repulsive field of
another is like trying to
balance a needle on its
point—it will always fall to
one side or the other.
However, just as you
might deploy a few care-
fully positioned pebbles to
keep the needle upright, the
researchers in the Nether-
lands found that they could
hold their magnet steady by
taking advantage of a curi-
ous property of nonmagnetic
materials.

All nonmagnetic materi-

als—including human fin-
gers—have the ability to
slightly disrupt a magnetic
field, a property called dia-
magnetism. The disruption
produced by the fingers of
the Dutch researchers gen-
tly pushed the magnet back
into position each time it be-
gan to wiggle away from the
balance point, explains Uni-
versity of Nijmegen physi-
cist Andrey K. Geim, who re-
ported on the team's work in



the July 22 issue of *Nature*.

Geim envisions a number
of applications for his team's
technique—using graphite in
place of fingertips—including
frictionless bearings for de-
vices that rotate at an ex-
treme rate.

A CLEANER WAY TO MAKE ETHYLENE

RESEARCHERS AT THE UNIVERSITY OF MINNESOTA HAVE
developed a faster and cleaner process for producing
ethylene, the raw material used to make everything from
polyester suits to milk jugs.

Nearly 50 million tons of ethylene are produced each
year in the U.S. in a half-century-old process called
steam cracking. A five-story furnace is used to heat the
natural gas ethane to more than 1,400F, stripping away
hydrogen and producing ethylene. Because of its high
energy consumption, steam cracking produces nearly 1%
of U.S. emissions of the greenhouse gas carbon dioxide,
according to the Environmental Protection Agency.

Researcher Lanny D. Schmidt and his colleagues have
done away with the furnace. They feed ethane, hydro-
gen, and oxygen through a fingertip-size ceramic disk
filled with tiny holes and coated with platinum and tin.
The hydrogen and oxygen combine to generate heat, and
the metal catalyst speeds up the process 1,000-fold. Re-
actors employing the new process should be much small-
er, simpler, and cheaper than current ones, says Schmidt,
who reported in the July 30 issue of *Science*. And since
all the heat is generated internally, it should use far less
energy and be much less polluting.

HEALING HEARTS AND MINDS IN KOSOVO

AS THE KOSOVAR REFUGEES re-
turn home, international at-
tention has turned to recon-
struction. NATO countries have
pledged more than \$2 billion
toward rebuilding the physi-
cal and political infrastructure
of this war-torn land. But a
new study of refugees from
the earlier Bosnia-Herzegov-
ina war indicates that the
Kosovo recovery may stag-
nate if psychological wounds
left by the trauma of war, tor-
ture, and flight from home are
overlooked.

In the Aug. 4 issue of the
*Journal of the American
Medical Assn.*, Dr. Richard F.
Mollica, a psychiatrist at Har-
vard Medical School, reports
the results of a study of 534
adults living in a refugee
camp in Croatia. Mollica and
his colleagues found that
nearly 40% of the refugees
were suffering from depres-
sion, and one in four of the
refugees was functionally dis-
abled—unable to carry out
simple tasks such as walking
up a small hill or participating
in everyday family activities.
While some of the disabled
were suffering from physical
handicaps, many more ap-
peared to be unable to func-
tion simply because of the
psychological trauma they had
experienced.

Mollica, who has been
working with refugee popu-
lations for more than 20
years, suspects similar prob-
lems will arise among Koso-
var refugees. The answer, he
says, is not to turn tens of
thousands into psychiatric pa-
tients but to give them op-
portunities to help themselves
and each other. Work and al-
truism are very therapeutic,
Mollica says, and he recom-
mends actively involving
refugees in rebuilding their
own communities and en-
couraging the development of
local small businesses.

CURRENCY TRADING OR CURRENCY SCAM?

A New York firm may have bilked investors out of millions

The British female voice on Winthorpe Grant's recorded greeting is inviting: "We're a full-service foreign-currency firm, with 50 years' combined management experience...dedicated to helping you reach your investment goals." But on August 3, the New York attorney general's office seized records and computers from Winthorpe Grant, a six-month-old foreign-currency trading firm.

The goals of many investors were dashed after they rushed checks or wired money to this alleged commodities "bucket shop" tucked away in the office-park wilds of central Long Island. Regulators estimate investors have lost millions since February to the former rogue stockbrokers who run Winthorpe Grant. The firm allegedly committed a felony by "soliciting, offering and selling commodities through deceitful and fraudulent practices," according to an affidavit from the attorney general's office. A lawyer for Winthorpe Grant, David Hirschberg, denies the allegation and says that the FBI examined the firm's practices recently and found nothing.

The action against Winthorpe comes in the midst of the biggest attack ever on micro-cap stock fraud by the Securities & Exchange Commission this week, in which 82 individuals and firms were charged. It points to a worrisome trend: As more stock fraudsters are put out of business, many are moving into currency trading, an area almost devoid of regulation.

Winthorpe Grant, in Melville, N. Y., is one of a growing number of firms that trade foreign currency on behalf of average investors. But Winthorpe most likely never bought or sold actual currency. "There was no evidence of real trading—no order tickets, no dealer statements," says Louis F. Burke, an attorney specializing in financial instruments who has

studied customer statements from the firm. Winthorpe's lawyer denies this. Burke notes that many of these new, so-called currency firms do little or no trading and mostly pocket customers' money.

"Winthorpe said I could triple my money overnight," says Ronald Schrufer, an Anchorage (Alaska) investor who lost \$400,000 to the firm, the bulk of his savings. Says Hirschberg, "Customers are told they can

make a lot of money or lose it. The 10 to 15 "brokers" at Winthorpe cold-called hundreds of people a day, primarily small-business owners, from Dun & Bradstreet Corp. "credit cards." They were promised astronomical returns for little risk over their investments. Then mailed a brochure that stated "currencies are the world's most profitable markets...they invariably outperform stocks, bonds and other commodities."

When a Winthorpe broker had a customer, he would have the customer send a check for a few thousand dollars. After a day or two, he would inform the customer that he had made a profit. The broker went for higher stakes, and a bank "electronic transfer form" for the investor for approval (table). The broker enabled Winthorpe to tap into a customer's bank account for the amount needed to do a trade. Investors were told to trade frequently because fast moves were common in currency markets. "One time they called me to approve a \$1.2 million transfer. I told them I didn't have that kind of money," says Schrufer.

Schrufer says that Winthorpe brokers would also fax Reuters news stories about economic factors that "dramatically and immediately affect" the price of the yen, euro, or pound.

The firm's promotional material and confidential statements sent to customers indicate the firm closed its trades through First Financial Holding Corp. in Huntington, N. Y. (box). But First Financial was registered as a corporation by a principal, Winthorpe Grant, Gil Pasculli Jr., in November 1997. Efforts by BUSINESS WEEK to locate it at 757 Park Ave. in Huntington proved unsuccessful. There was no such address, nor does it have a listed phone number. Winthorpe's lawyer declines to comment on First Financial. He claims the firm trades through



PSST! YOU TOO CAN MAKE A KILLING!

According to an expert on currency trading instruments, it appears Winthorpe did little or no trading and that investors fabricated records.

y Management Corp.) in Eng-
where in Winthorpe's sales liter-
customer agreement is CMC
ed.

orpe Grant also allegedly pro-
vestors with fabricated trading
say experts. Bank records ob-
the attorney general show that
bruary to June of this year, in-
money was funneled into an ac-
a Long Island branch of Key
Winthorpe principals Lawrence
Michael Richard MacCaull, and
withdrew 93% of that money in
cash and checks.

good." And, as at Sterling Foster, there
was the broker disappearing act. As
Schruefer's losses mounted, he repeat-
edly called MacCaull, the "senior trad-
er" who was handling his account. He
was routinely told that MacCaull was in a
meeting, out of the office, or "on the
trading floor."

But there is no trading floor anywhere
near Winthorpe's Long Island offices.
Winthorpe is merely an open room con-
sisting of several cubicles with computers,
phones, and a fax machine.

Besides Sterling Foster, MacCaull, Pas-
culli, and Salice have a long history of
working together at other micro-cap

trade among themselves, but it leaves a
regulatory gap when it comes to small
investors. "We're encouraged to ignore
activity among average investors be-
cause we can't do anything about it,"
says an investigator at a commodities
regulatory agency.

Individual states may have broader
power in prosecuting such activity be-
cause some states, such as New York
and Texas, require foreign currency
traders to be registered and treat for-
eign currency as a security. Texas secu-
rities regulators recently shut down a
foreign-exchange scam run by a former
local football star that cost investors an
estimated \$50 million.

The action against
Winthorpe Grant is the first
to be brought about by a
new division of the New
York attorney general's office,
the Securities Prosecutions
Unit. "We're strengthening
state securities enforcement,
especially in regard to those

REALITY CHECK: *The
address on Winthorpe
statements doesn't exist*

FIRST FOREIGN HOLDING CORP.
757 PARK AVENUE SUITE 200, HUNTINGTON, NY 11747

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921 SALT CT.
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(87) 562-3175

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pe's lawyer says
rs' money went into First For-
ding Corp.'s account.
orpe Grant is run by former
kers who were all barred or sus-
from the securities industry. The
ncipals in the firm—Pasculli, Sal-
MacCaull, along with another
e, Vincent Vaccaro—all previ-
orked at Sterling Foster & Co.,
rious micro-cap stock fraud firms
shut down by regulators in
asically, these guys got nailed
curities industry and migrated
ign currency, where regulation is
" says Bradley W. Skolnik, Indi-
urities commissioner and presi-
t of the North American Secu-
ministrators Assn.

ttorney general's office says that
om techniques used at Sterling
lso formerly situated in Melville,
ilar to those used at Winthorpe.
ere was the hard sell. According
efer, he was initially told, "We
been around as long as Merrill
but our reputation is just as

stock firms such as
IAR Securities, Royce Investment Group,
J. Gregory & Co., and most recently, In-
ternational Bond & Share. All of these
firms have been in trouble with regula-
tors. "These guys could be poster boys
for the rogue broker industry," says Skol-
nik. They, along with all of the brokers
employed by Winthorpe, have "extensive
regulatory disciplinary histories," accord-
ing to the attorney general's affidavit.
Securities industry records indicate the
principals have engaged in activities such
as unauthorized trading and stock
manipulation.

Foreign currency is the perfect are-
na for rogues. Regulation among small
investors is vague at best. Because of a
1974 amendment to the Commodity
Exchange Act, federal commodities regu-
lators do not have jurisdiction over
the interbank foreign-exchange (forex)
market, where global institutions and
banks trade some \$1.5 trillion daily.
The amendment's intent, say experts,
was to make it easy for institutions to

entities that too often fall beneath the
radar screen of the SEC or other federal
agencies," says Eliot Spitzer, New York's
attorney general.

Still, there is scant coordination among
individual states or between states and
federal agencies. Because of this, foreign-
currency promotions are heating up.
There are now numerous classified ads
with headings like "Triple Your Money In
a Week, Trade Japanese Yen!" A cable-
television commercial features a Jay
Gatsby-like party host telling a guest he
made his money by trading currency.
And the Internet has become a hotbed
for forex scams.

But Winthorpe Grant has no Web
site, nor do they run television or clas-
sified ads. The firm gets customers the
old-fashioned way, by making cold calls.
And unlike the voice on Winthorpe's
recorded greeting, not one of them has
a British accent.

*By Marcia Vickers
in New York*

THE BAIT

nt broker
stor,
gains,
small
h to
oreign
ally
000. In-
heck.

Broker sends "state-
ment" back within 48
hours that shows in-
vestor made a profit,
usually a few thou-
sand dollars, thus
winning the investor's
confidence.

THE HOOK

Broker faxes "electron-
ic funds transfer" re-
quest form to investor.
The request is usually
for \$25,000. Investor
signs and faxes back.
Money is wired directly
from investor's bank to
Winthorpe Grant's
bank.

THE CATCH

Broker tells investor
he or she should
send more money im-
mediately to take ad-
vantage of some news
event, typically about
the yen or the euro.
Investor complies. This
is repeated several
times.

THE KILL

Statements show that
investor begins to lose
money in large
amounts. Typical losses
are around \$25,000,
accompanied by mi-
nuscule gains, every
few days until all the
money is gone.

CITIGROUP: SO MUCH FOR 50-50

Weill is in the top seat, and Reed is looking forward

On the cover of Citigroup's current annual report, there's a picture of a car with the words "just married" scrawled on the back window. It's an apt metaphor—both for the merger that created America's biggest financial services company and for the relationship between Citi's Co-Chief Executives, Sanford I. Weill and John S. Reed. Now, after a year of ups and downs, the association between the two has taken a new turn.

In an internal memo dated July 28, Reed and Weill said they had agreed to split up their responsibilities atop the company created by last year's merger of Weill's Travelers Group and Reed's Citicorp. And according to consultants, company insiders, and investors, the announcement signals that Weill is in the driver's seat.

"Sandy," the memo says, "will act as the primary focal point for the company's operating business—es and financial function." Reed will be looking ahead: "John will act as the primary focal point for the Internet, advanced development, technology, human resources and legal function." Risk manage-

ment, credit matters, and strategic planning will still be handled jointly.

that "Sandy won," says one insider. Investors seem to like the idea. "The nuts and the bolts—who gets their budget cut—is up to Weill, and that's a good match to their personalities," says James K. Schmidt, portfolio manager of the \$3 billion John Hancock Financial Industries Fund. Kenneth C. Feinberg, co-portfolio



Despite what may be on paper, "Weill is the chairman and CEO"

WEILL AND REED: CREATING SEPARATE SPHERES OF INFLUENCE

ment, credit matters, and strategic planning will still be handled jointly.

Upshot? "De facto, the co-CEO [concept] is dead," says David A. Nadler, chairman of the Delta Consulting Group Inc., which advises companies on organizational structure. Based on the memo, Nadler says, "Sandy Weill is the chairman and CEO." Reed's longer-range focus is more in keeping with the job of a vice-chairman, says Nadler. Other signs also point to Travelers' dominance: Already, most top jobs at Citi are held by Weill's lieutenants. Within Citi, the perception is

manager at Davis Selected Advisers, owner of about 21 million Citi shares, says he's also encouraged: "Sandy has proven himself to be a great operator of businesses over his 40-year career, and clearly now he is being given a lot of the operational responsibility."

A Citigroup spokesman declined comment on the memo. In it, Weill and Reed said they were creating spheres of influence because they trusted each other. "We feel we... instinctively rely on each other's judgment," they wrote. "We no longer feel the need to attend every

meeting together or read all the memos." Major decisions, it adds, still be made jointly.

But the memo underscores the culties the two have faced in running such a large company in tandem. In an interview with BUSINESS WEEK, Reed said he and Weill had overcome differences of temperament to work together, but that neither would spend his entire life as co-CEO. Weill acknowledged that the co-CEO situation was unwieldy.

FUTURE PLANS. The new division reflects the histories of both men. Reed, 66, is a hands-on operator who oversees companies and remakes the cost-conscious image. Reed, 60, is a long-range thinker who has kept secret of his interest in Internet. Reed, too, was known for his authority until the near-collapse of Citicorp in the early 1990s prompted him to play a greater day-to-day role.

Although the memo makes no mention of succession, Reed's more creative role strengthened speculation that he is more interested than Weill in leaving. "The scenario where Reed goes on to do other things and Sandy stays to be in charge has to be seen as a higher-likelihood event," says David Berry, research director at investment bank Keefe, Bruyette & Woods.



In the meantime, Citigroup as a company is speeding along. During the second quarter, it made a record \$2.4 billion as capital markets produced a profit that beat management's goals. Weill says that, like that, Weill and Reed did themselves anything they like. Investors won't complain.

By Gary Silverman, with
Nathans Spiro, in New York

WHAT IF THERE WAS



The magic box is an IBM @ business server.



MAGIC BOX.

WHAT DOES IT TAKE TO CUT THE COST OF PROCESSING A BANK TRANSACTION FROM \$1.07 TO \$.01? WHAT DOES IT TAKE TO CUT THE COST OF PROCESSING AN AIRLINE TICKET FROM \$8 TO \$1? WHAT DOES IT TAKE TO TURN A \$150 BROKER'S CALL INTO A \$10 WEB VISIT? MAGIC. THE MAGIC OF e-BUSINESS. IBM SERVERS ARE THE MOST IMPORTANT PART OF ANY BUSINESS NETWORK. IBM MAKES THE MOST POWERFUL, MOST RELIABLE SERVERS IN THE WORLD. AND WE NOT ONLY MAKE MORE KINDS OF THEM THAN ANY OTHER COMPANY IN THE WORLD, WE KNOW HOW TO GET THE MAGIC OUT OF THE BOX AND INTO YOUR BOTTOM LINE. www.ibm.com/magicbox



MOGULS

PAUL ALLEN GETS A LITTLE RESPECT

Dilettante no more, the country's third-richest man becomes a serious cable player

He was one of the big draws at the cable industry's annual gathering in June. But for Microsoft Corp. co-founder Paul G. Allen, who is rapidly emerging as a new and powerful player in the cable industry, it was an awkward coming-out party. Shifting nervously onstage alongside such media heavyweights as Time Warner Chairman Gerald M. Levin and Viacom Inc. head Sumner M. Redstone, the 46-year-old Allen mumbled as he spoke, underwhelming the crowd with his platitudes about how "technology will make our life easier."

With his retiring manner and Buddy Holly glasses, Allen, the third-richest man in the country behind Bill Gates and Warren Buffett, is still more at ease playing his electric guitar in private than

giving speeches. But make no mistake. In short order Paul Allen has built an online empire. Over the past 16 months, he has snatched up cable and Internet companies worth at least \$25 billion, betting along with AT&T chief C. Michael Armstrong and Gates, Allen's old friend and schoolmate, that cable-TV systems will soon win the race against phone lines and satellites to bring high-speed Internet access to consumers. Now, Allen, who was unavailable for an interview, is pushing to raise \$3.5 billion more in an initial public offering of Charter Communications Inc., his main cable holding.

DERIDED. Can Allen really become a powerhouse in the emerging world of online-everything? Remember, despite playing a key role in the launch of Microsoft, Allen was derided most of his adult life as a billionaire dilettante who got rich mainly because he was a high school pal of Gates's. While Gates has built Microsoft into one of the most formidable companies on the globe, Allen left in 1983 to fight off cancer. He beat it, but rather than jump right back into the fray, Allen decided to spend time sailing on his 150-

foot yacht and jetting around the globe on his Boeing 757.

For years, meanwhile, Allen talked up his vision of a "wired world," but his strategy was to follow. He was an early investor in America Online Inc., but sold his stake in 1994 after a dispute over control with AOL CEO Steve Case. And he more than tripled his original million investment, had he held it. In 1995, after befriending real estate mogul David Geffen, he poured down \$500 million for an 18% stake in DreamWorks SKG, the movie studio Geffen founded with director Steven Spielberg and former Walt Disney executive Jeffrey Katzenberg. The studio is still unprofitable.

Now, however, both Allen's wired-world idea and his persona have grown up. Gone are the scruffy beard and scraggy hair. Gone, too, are the scattershot investments. These days Allen is focused. In 1998, he paid \$2.8 billion for Dallas

CLEAN IMAGE
scruffy beard and scraggy hair

If Internet billing is the future,



the future
has arrived.

Welcome to a future where the power of the Internet transforms your billing from a mere accounting function into a strategic business tool. Where your Internet-based bills enhance customer loyalty, increase your brand awareness and create new revenue streams. Derivion's unique service bureau approach to Electronic Bill Presentment and Payment makes that future easy and affordable for every company. And it's ready now. The future is waiting for you. Find it at www.derivion.com.

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People

Marcus Cable Co. A month later, he shelled out another \$4.5 billion for St. Louis-based Charter Communications. A dozen more deals since have turned Allen into the fifth-largest cable operator, with 6.2 million subscribers, behind such giants as AT&T and Time Warner. Says Leo T. Hindery, CEO of AT&T Broadband Services: "He's got enough subscribers to be a very major player."

Owning the pipeline to the Internet is the big play. But Allen also wants a hand

in what consumers see once they get there. So, unlike AT&T and other cable giants that are focusing mainly on building delivery systems, Allen has been buying into an array of services and content companies. Key to his strategy is his 24% stake in Denver-based High Speed Access Corp., which provides an AOL-like entry to the Net via cable. Eventually, when Charter subscribers leave home, they will be able to log on to the Net via Metricom Inc., a wireless net-

work in which he has a 49% stake. Equally important is the battle for content companies he is amassing. Working covering the spectrum from shopping and entertainment to information, the companies won't give Allen's network any proprietary access to content. They will ensure that he has a role in determining what the Net looks like as it evolves. He has stakes in portal company Go2Net, E-commerce site priceline.com, music site Liquid Audio, and Ox

BUSY BILLIONAIRE

Paul Allen is racing to build a full-service cable and Internet empire. Here are key deals over the past eight months:

DATA COMPANY RECORDS

DEC. 1998		MARCH	
	(in millions)		(in millions)
Marcus Cable	\$2,800	Go2Net (Web portal)	\$426
5% of Wink Communications (interactive TV)	\$10		
JAN. 1999		MAY	
Charter Communications (cable)	\$4,500	Falcon Communications (cable)	\$3,600
10 % of TiVo (digital TV)	\$15		
24% of High Speed Access (cable ISP)	\$20	JUNE	
		Bresnan Communs. (cable)	\$3,100
		AUGUST	
		Allegiance Telecom (phone, ISP)	\$75
		TOTAL \$14.5 billion	

Media, Gera Laybourne's Oprah Winfrey ble-TV and Int company geared ward women. All told, owns pieces of than 100 nor companies, val more than \$5 "And we still lot more tom done," says W D. Savoy, Alle year-old top tenant and pre of his Vulcar tures Inc. i

The shoe is on the other foot.

id. Savoy, a former investor who has worked with r 13 years, serves as an . Allen and Savoy huddle at they want to buy next, oy hunts down the best unches the numbers, and briefing papers to Allen.

AWAY. It's up to Allen, of o make a deal, and he ick the tires before writ- ck. When he invested in ed Access, the cable mo- al, Allen hooked up his puter with cable Internet rs Excite@Home, and nner, clicking away for each, says HSA president itcock Sr. "He is the ulti- sumer," adds Pitcock. "If t, he figures the guy at oing to as well."

out Web sites to invest fun part. But Allen still of hard work before his ire is up and running smoothly. nsiders expect him to use pro- n the IPO to pay down debt lete the rollout of fiber-optic e problem: His cable systems ed throughout the country, hard-to-wire rural areas. So ls to beef up key markets in east and on the Coast. Already,



BASKETBALL OUTING: Allen with buddy Bill Gates

AT&T's Hindery says he is negotiating to swap or sell off some of AT&T's Los Angeles cable assets to Allen.

To integrate the new content companies, meanwhile, Allen has been gathering execs for the past two years for his annual "Synergy Summit" at a Scottsdale, Ariz., resort. Allen himself rarely shows, leaving much of the brainstorming

to Savoy and the crew of his partner companies.

In many ways, Allen is as quirky as ever. He lives on an estate outside Seattle where he also has built a house for his mother, Faye. He and his sister, Jody, still spend a lot of time on such Allen pet projects as building a new stadium for his Seattle Seahawks football team. And when he does make an appearance at the Synergy Summit, it's often to do a Jimi Hendrix imitation on his electric guitar. "He plays a very good guitar for a billionaire computer genius," says DreamWorks' Geffen. Then there is paulallen.com, his personal Web site complete with favorite diving spots, movies, and books.

But Allen looks to be on the right track this time. Hardly the typical cable tycoon, he comes from the very different world of PCs and the Internet. That, as much as his deep pockets, may give this cable guy an edge. The ever-shy Allen may not show up at next year's cable convention, but he and his Charter Communications have already made their mark.

By Ronald Grover in Los Angeles, Richard Siklos in New York, and Michael Moeller in San Mateo, Calif.

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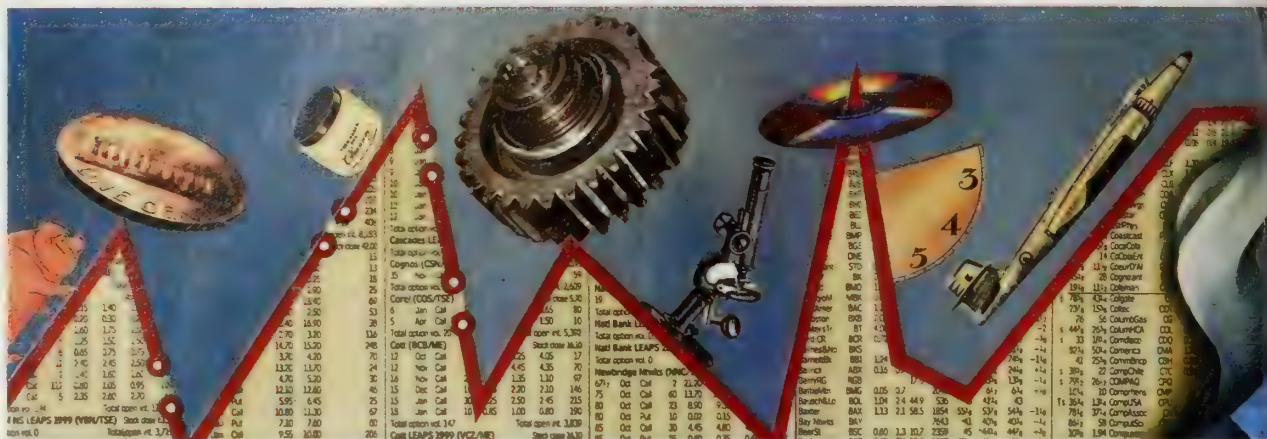
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Corporate Scoreboard



BIG SPENDERS ARE KEEPING THIS PARTY GOING

Consumer and corporate outlays crush any thoughts of a slowdown

Led by tech companies, Corporate America's profits are cruising at warp speed. The double-digit growth rate in U.S. earnings has rendered the unpleasantness of 1998—when second-quarter profits dropped 2%—a distant memory. Profits for the 900 companies on BUSINESS WEEK's Corporate Scoreboard rose a merry 28%

during this year's second quarter, the best performance since 1996's final period. Operating income, which removes special charges and other one-time events, was up a healthy 12%. Revenue growth, meanwhile, clocked a solid 10%.

The biggest boost to the bottom line has come from home. Although exports remain sluggish, low inflation and high

employment in the U.S. have made it a simple, undeniable fact: Consumer businesses are spending tons of money. It also helps that companies are looking to make efficiency gains. The annual productivity growth rate has doubled, to 2%, over the past four years. These days, there's little to deter consumers from flocking to the stores.

Winners and Losers in Quarterly Profits

INDUSTRIES

LEADERS	
PERCENTAGE CHANGE FROM 1998'S SECOND QUARTER	
POLLUTION CONTROL	185%
PUBLISHING	183
ALUMINUM	166
MISCELLANEOUS SERVICES	125
TEXTILES	115
ENTERTAINMENT	112
COMPUTER SOFTWARE & SVCS.	95
AUTO PARTS & EQUIPMENT	83
SEMICONDUCTORS	81
DRUG DISTRIBUTION	56
BANKS-WEST & SOUTHWEST	56
FOOD DISTRIBUTION	52
CARS & TRUCKS	51
EATING PLACES	40
CONSTRUCTION & REAL ESTATE	37

ALL INDUSTRY AVERAGE: +28%

LAGGARDS	
PERCENTAGE CHANGE FROM 1998'S SECOND QUARTER	
CONSTRUCTION & ENG.	LOSS
GENERAL MANUFACTURING	-97%
NONFERROUS METALS	-95
BROADCASTING	-76
PETROLEUM SERVICES	-71
STEEL	-63
TIRE & RUBBER	-51
SPECIAL MACHINERY	-29
PERSONAL CARE	-21
COAL, OIL & GAS	-17
BUSINESS MACHINES & SVCS.	-14
MISCELLANEOUS LEISURE	-14
PRINTING & ADVERTISING	-13
CHEMICALS	-10
SAVINGS & LOAN	-9

COMPANIES

WHO MADE THE MOST	
MILLIONS OF DOLLARS	
GENERAL ELECTRIC	\$2820
CITIGROUP	2448
IBM	2391
FORD MOTOR	2338
MICROSOFT***	2202
PHILIP MORRIS	2030
BANK OF AMERICA	1915
INTEL	1749
GENERAL MOTORS	1734
AT&T	1588
MERCK	1478
CHASE MANHATTAN	1393
AIG	1277
EXXON	1205
SBC COMMUNICATIONS	1176

WHO LOST THE MOST	
MILLIONS OF DOLLARS	
FORTUNE BRANDS	-\$1
GENENTECH	
NAT'L. SEMICONDUCTOR***	
SPRINT PCS GROUP	
COMPUTER ASSOCIATES*	
NEXTEL COMMUNICATIONS	
MATTEL	
COMPAQ COMPUTER	
MEDIAONE GROUP	
MICROAGE	
CONAGRA***	
VLASIC FOODS INTL.**	
AMAZON.COM	
TENET HEALTHCARE***	
WESTERN DIGITAL***	

* FISCAL FIRST QUARTER ** FISCAL THIRD QUARTER *** FISCAL FOURTH QUARTER

DATA: STANDARD & POOR'S COMPUSTAT, A DIVISION OF THE MCGRAW-HILL COMPANIES



The Conference Board's index of consumer confidence hit a 30-year high in July. Why? Pockets are full of folding lawn chairs, while employment growth hit 2.2% as well. "Goods have been off the shelf—almost too fast to sell," says Credit Suisse First American economist Rosanne M. Cahn.

Consumers have been avid shoppers, shelling out cash for new plant and equipment, but particularly for consumer shopping spree pushed capex up 10.8%, after a rise of 1.1% in the first quarter. One of the biggest spenders is General Electric. And why not? Its wide array of products, ranging from aircraft engines to financial services to the NBC television network, gave it the highest gain: \$2.8 billion, up a strong 15%. Nowhere are flush times better than in the tech world. "Communications are the backbone of this growth," says David L. Forster, senior economist at Bear, Stearns & Co. IBM's boffo 65% gain over the earlier period, to \$2.4 billion, from across-the-board increases in hardware, software, and services. Big gains came nearly \$9.5 billion in new contracts during the quarter.

Meanwhile, Microsoft Corp.'s dominance continues. Paced by selling Office and BackOffice systems, profits surged 62%, letting Microsoft off its ongoing antitrust cases. The \$80 million charge it paid in legal expenses was a pittance compared to its \$2.2 billion in net earnings the same time, profits at semiconductor ally, Intel Corp., rose 19%, to \$1.7 billion. Thanks to cost-cutting, Intel racked up gains while trimming prices of its products to grab more market share.

Companies that were hurting have rebounded nicely. In the second quarter, Motorola Inc. posted a \$1.3 billion loss after it took a

large and painful write-off for restructuring largely due to sagging chip demand abroad. Lately, though, the chip business has revived worldwide. That has helped the electronics giant to score gains in a host of thriving areas, like digital cellular phones, letting it post a tidy \$206 million profit.

BURNING RUBBER. The good news extends well beyond tech. General Motors Corp., hobbled by a strike last year, roared back with a 467% profit increase, to \$1.7 billion. Consumers are snapping up big-ticket, high-profit minivans, sport-utility vehicles, and trucks. "The North American market is red-hot," says GM President G. Richard Wagoner Jr. Ford Motor Co. enjoyed an impressive 13% sales gain, even though earnings dipped 2%, to \$2.3 billion, due to a \$146 million

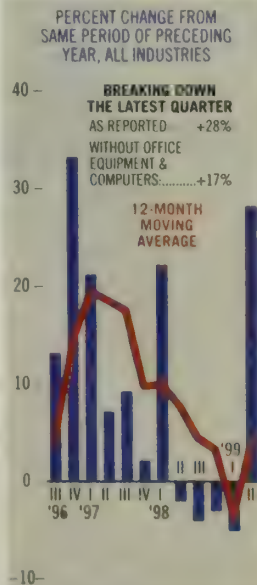
charge related to its March acquisition of Volvo.

One of the strongest sectors was publishing, which enjoyed fat advertising sales and overall scored a stellar 183% profits boost, vs. a so-so 8% in the year-before quarter. Time Warner Inc., the world's largest media company, enjoyed a spectacular 487% earnings jump, to \$593 million, partly from selling some of its cable systems but also from robust cable-channel and magazine-ad revenue. Cash flow, a common measure for highly leveraged companies like Time Warner, jumped 15%, to \$1.25 billion.

Financial services, damaged by problems overseas in 1998's second half, were back in the sweet spot. Banks, reveling in heavy loan demand for products from mortgages to credit cards,

A Spotlight on Second-Quarter Profits

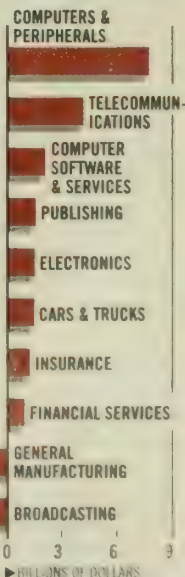
AFTERTAX PROFITS QUARTER BY QUARTER



INDUSTRIES WITH THE BIGGEST DOLLAR CHANGE IN THE QUARTER

Lobbied a softball, corporations hit one out of the ballpark this quarter. Last year, losses at AT&T, Compaq, and Motorola combined with the strike at General Motors to clobber second-quarter 1998 earnings. In Q2 1999, profits at each of those companies had a billion dollar turnaround from last year, though Compaq still lost money. The bounceback in profits was also helped by a 10% jump in sales, the first double-digit increase in revenues since the third-quarter of 1997. Of course, it wasn't all good news. Losses at MediaOne Group and Fortune Brands sank Broadcasters and Manufacturers, respectively. But overall, this quarter was phenomenal. Now, will it continue?

CHANGE IN AFTERTAX PROFITS FROM 1998

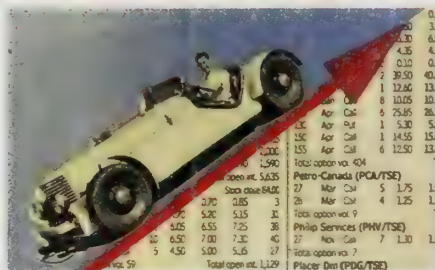


DATA: STANDARD & POOR'S COMPUSTAT, A DIVISION OF THE MCGRAW-HILL COMPANIES

Corporate Scoreboard

were up 17% overall. Chase Manhattan Corp. saw profits rise 30%, to \$1.4 billion. On Wall Street, stock trading and deal underwriting let Merrill Lynch & Co. deliver a 23% earnings hike, to \$673 million, while rival Morgan Stanley Dean Witter rose 35%, to hit \$1.2 billion. At the same time, rising interest rates did little to cool off the boom in housing. Homebuilders' profits were up 37%, led by the likes of Lennar, Centex Homes, and Kaufman & Broad.

NICKS AND CUTS. Amid the euphoria, disappointments did pop up, however, especially where commodities were involved. Grain prices are in the cellar, so farm-equipment makers are smarting. Deere & Co.'s earnings were down 59%, to \$150 million. And energy companies were down 24%, with Exxon, Sunoco, and Texaco all suffering profit plunges. Plus, a rally in oil prices failed to offset



persisting weakness in chemical prices.

Plus, there were individual lemons in otherwise thriving industries. Compaq Computer Corp. had a \$184 million loss as more nimble direct sellers, such as Dell Computer Corp., took away business. But some companies had poor numbers because of charges, not operational problems. Genentech Inc. recorded a \$923 million loss after taking a charge to cover parent Roche Holding Ltd.'s cost of buying the one-third of the biotech com-

pany it didn't already own. Genentech operating profits rose 81%. On the other hand, Brands Inc. had a similar situation. Operating profits rose 14%, but strong sales in its golf and home lines. Fortune's \$1.2 billion in systems from restructuring costs, an accounting change related to re-acquisitions, which include Cobra and Whyte & Mackay whiskey.

What's next? First Call Corp. says its climbing to 21% for the year 1999. Says Charles L. Hill, First Call director of research: "Near to don't see a cloud in the sky." That's the famous last words, but for now the outlook is bright indeed.

By Larry Light in New York, Kathleen Kerwin in Detroit, and David Hardt in San Mateo, Calif., and reports

OVERSEAS ECONOMIES AREN'T CHIPPING IN YET

Stock prices may be soaring in Asia as the local economies start to grow again, but don't look for much of a payoff in Seattle or Atlanta. In fact, little of the rebound in overseas economies has filtered through to U.S. corporate bottom lines yet—and economists worry that weak recoveries abroad may peter out before they have much impact at home.

Certainly, things are better than last fall, at the height of the financial crisis that rocked Asia and Latin America. Earnings from U.S. overseas operations rose 10.5% in the first quarter, according to the Commerce Dept. Even better, U.S. exports grew at a 3.7% rate in the second quarter. Although that's still well below the double-digit export growth experienced at the tail end of the boom, it's far better than the negative territory that was seen at the end of 1998. David Wyss, chief economist at Standard & Poor's DRI, expects 5% growth in the third quarter and 2% in the fourth, as Boeing Co.'s airplane shipments fall off. "It's going to take several years before we see the [overseas] earnings growth we saw prior to the crisis," says James Glassman, a senior economist at Chase Securities Inc.

If the worst is over for Southeast Asian economies, however, it will be difficult for them to stage a sustained rally until Japan, their biggest trading partner, turns around. Signs of life in

the Japanese economy reflect a huge injection of government spending. The money tends to get funneled into public infrastructure projects, such as bridges and roads. That spending has yet to spark a commensurate increase in either consumer demand or private capital investment—the kind of boom that results in sales of more Boeing airliners or cases of Coke. "It's a temporary shot in the arm," says Sung Won Sohn, chief economist at Wells Fargo & Co. Meanwhile, south-of-the-border economies, such as Brazil's and Argentina's, remain mired in recession despite some early signs of improvement.

Things would be even worse if it weren't for free-spending U.S. consumers. The U.S. racked up a record \$21.3 billion trade deficit in May as imports of foreign goods and services grew 2%, while exports shrank 1%. Says Glassman at Chase: "We've been importing them out of their recessions. So far, it hasn't helped U.S. exporters much."

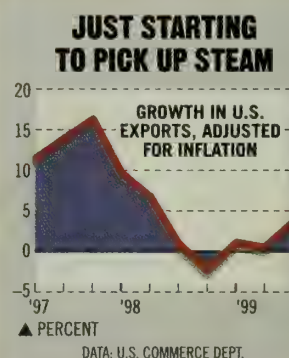
Indeed, even as some sectors are starting to get a bit of a lift abroad, the overall picture is mixed. Technology seems to be bouncing back the

fastest. IBM reported a healthy 15% boost in Asian sales of computer hardware, software, and services, which helped it record an overall 65% earnings increase over the year-earlier period. But consumer-goods companies are still struggling. Coca-Cola Co. saw weak sales in Asia, Latin America, and Europe contributed to a 2% decrease in both global case sales and

syrup shipments. **PARKED.** Heavy machinery is even tougher to sell than soft drinks. Caterpillar Inc. reported sales of its giant trucks, loaders, and other machinery 34% in Latin America in the last quarter. "Demand remains weak in several geographic regions," says Caterpillar Chief Executive A. Barton.

The upside, of course, is that many companies are posting gains with much contribution from overseas, when a real turnaround emerges in Asia or Latin America, the effect could be breathtaking. For now, though, U.S. companies know their earnings growth will have to be largely home-grown.

By Andrew Osterland in Chicago



CORPORATE SCOREBOARD

EARNINGS PER SHARE: For most recent 12-month period. Includes all common-stock equivalents.

[illegible]

CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	PRICE EARNINGS RATIO 7-23
	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
(C) TIRE & RUBBER												
GROUP COMPOSITE	3796.2	-2	7479.4	-2	119.8	-51	186.7	-62	3.2	6.4	12.0	19
BANDAG	252.1	-5	476.3	-5	16.1	14	26.2	12	6.4	5.3	13.6	12
COOPER TIRE & RUBBER	495.4	7	963.2	7	38.0	17	69.3	18	7.7	7.0	15.0	12
GOODYEAR TIRE & RUBBER	3048.7	-3	6039.9	-3	65.7	-67	91.2	-78	2.2	6.3	11.0	22
3 BANKS												
INDUSTRY COMPOSITE	80452.3	3	160102.0	4	12584.0	17	24693.4	22	15.6	13.7	16.3	20
(A) BANKS - EAST												
GROUP COMPOSITE	27203.6	2	54126.7	3	4127.6	18	7969.3	26	15.2	13.2	18.4	18
BANK OF NEW YORK	1490.0**	4	2972.0	6	323.0	9	639.0	11	21.7	20.6	23.7	23
BANKBOSTON	2159.4	17	4125.9	9	250.2	3	473.2	-1	11.6	13.1	15.5	18
CHASE MANHATTAN	8344.0	0	16311.0	-2	1393.0	30	2566.0	43	16.7	12.9	20.6	16
FLEET FINANCIAL GROUP	2819.0	12	5556.0	15	450.0	15	888.0	24	16.0	15.6	18.2	15
MBNA	1615.4	32	3060.4	28	227.2	32	413.2	29	14.1	14.1	23.5	28
MELLON BANK	1526.0**	6	3109.0	10	238.0	11	518.0	20	15.6	15.0	22.3	19
MORGAN (J.P.)	4374.0**	-12	9233.0	-7	504.0	5	1104.0	54	11.5	9.7	11.8	20 ¹
PEOPLES HERITAGE FINANCIAL GROUP	254.1**	6	493.8	3	40.8	225	54.3	24	16.0	5.2	13.2	16
PNC BANK	1868.0	-1	3889.0	6	315.0	13	640.0	16	16.9	14.9	20.6	14
REPUBLIC NEW YORK	904.0	-9	1752.3	-9	143.1	20	189.6	-20	15.8	11.9	6.5	41
STATE STREET	1185.0**	14	2301.0	15	123.0	13	245.0	14	10.4	10.5	19.1	25
SUMMIT BANCORP.	664.6	6	1323.2	7	120.3	2	239.1	4	18.1	18.9	18.2	14
(B) BANKS - MIDWEST												
GROUP COMPOSITE	22591.2	2	45319.4	5	3818.7	19	7712.0	23	16.9	14.6	16.0	22
BANK ONE	6458.0	-1	13244.0	4	992.0	11	2143.0	17	15.4	13.7	16.4	20
COMERICA	836.2**	5	1622.5	1	167.4	11	326.5	11	20.0	18.8	20.7	15
FIFTH THIRD BANCORP	709.2	7	1380.4	5	161.6	180	312.0	71	22.8	8.7	18.5	31
FIRSTAR	888.3	2	1760.9	3	170.8	15	340.3	18	19.2	17.1	13.4	37
HUNTINGTON BANCSHARES	615.8	1	1221.3	1	105.0	14	201.5	11	17.0	15.1	15.0	23
KEYCORP	1918.0	9	3908.0	14	280.0	12	573.0	18	14.6	14.2	17.4	13
MERCANTILE BANCORPORATION	714.5	-1	1427.9	-1	120.5	12	238.6	7	16.9	14.9	12.8	22
NATIONAL CITY	2041.1	1	4116.2	6	354.5	7	705.5	62	17.4	16.4	21.5	15
NORTHERN TRUST	672.3**	6	1328.6	6	99.7	14	194.8	13	14.8	13.7	19.0	28
OLD KENT FINANCIAL	387.1**	3	765.6	1	62.0	13	120.6	13	16.0	14.5	20.3	22
U.S. BANCORP	2040.8	7	4019.1	9	374.3	17	741.1	14	18.3	16.8	22.5	17
WELLS FARGO	5310.0**	2	10525.0	3	931.0	29	1815.0	29	17.5	13.8	11.1	30
(C) BANKS - SOUTH & SOUTHEAST												
GROUP COMPOSITE	27517.6	0	54608.1	1	4194.3	12	8147.3	15	15.2	13.6	14.7	19
AMSOUTH BANCORPORATION	455.6	-4	899.8	-1	74.2	13	144.6	13	16.3	13.7	19.6	15
BANK OF AMERICA	12728.0	-4	25152.0	-5	1915.0	-17	3829.0	6	15.0	17.3	12.1	23
BB&T	886.9	13	1715.2	10	152.8	19	291.2	17	17.2	16.3	19.6	19
FIRST AMERICAN	471.7	2	925.4	2	57.3	164	123.8	44	12.2	4.7	14.0	20
FIRST TENNESSEE NATIONAL	587.4**	18	1174.2	25	61.0	16	114.0	15	10.4	10.6	20.9	21
FIRST UNION	5330.0**	1	10852.0	6	873.0	251	1579.0	52	16.4	4.7	21.1	13
HIBERNIA	309.3	7	611.6	8	47.4	7	76.9	-10	15.3	15.3	13.2	14
POPULAR	540.3	14	1071.6	14	64.0	11	127.6	14	11.8	12.1	14.9	17
REGIONS FINANCIAL	829.6	8	1650.5	10	142.0	12	278.5	14	17.1	16.4	14.6	18
SOUTHTRUST	802.3	10	1584.1	12	109.7	23	214.2	22	13.7	12.3	14.4	16
SUNTRUST BANKS	1921.8	4	3808.8	5	293.7	8	575.4	7	15.3	14.7	13.4	21
SYNOVUS FINANCIAL	387.1	22	750.5	17	50.9	15	99.1	16	13.2	13.9	18.3	26
UNION PLANTERS	706.0	0	1386.9	-1	105.8	33	203.1	10	15.0	11.2	8.7	27
WACHOVIA	1561.6	3	3025.5	4	247.6	18	490.8	21	15.9	13.9	17.7	17
(D) BANKS - WEST & SOUTHWEST												
GROUP COMPOSITE	3139.9	32	6047.8	31	443.3	56	864.8	46	14.1	12.0	17.1	21
BANCWEST	307.0	67	609.8	69	42.0	94	82.3	92	13.7	11.8	6.7	19
FIRST SECURITY	522.5	11	1015.7	11	68.8	23	133.7	14	13.2	11.9	15.9	18
PACIFIC CENTURY FINANCIAL	318.7	-3	640.3	-2	38.5	NM	73.9	99	12.1	0.9	11.8	12
PROVIDENT FINANCIAL	944.4	100	1713.3	99	126.5	101	240.0	102	13.4	13.3	45.2	35
UNIONBANCAL	671.5	2	1328.8	2	114.7	6	233.2	14	17.1	16.4	17.5	13
ZIONS BANCORPORATION	375.8	41	739.9	41	52.8	60	101.7	41	14.1	12.4	16.7	26
4 CHEMICALS												
INDUSTRY COMPOSITE	27322.3	7	53043.3	5	2297.8	-10	4196.6	-12	8.4	10.0	10.3	38
AIR PRODUCTS & CHEMICALS (3)	1237.8	1	2491.1	2	94.6	-31	201.5	-22	7.6	11.3	16.1	17
ARCH CHEMICALS	268.2	-1	493.2	0	20.9	-1	34.4	-8	7.8	7.8	NA	NA
CABOT (3)	423.6	13	859.4	3	22.4	-33	55.6	-21	5.3	8.8	15.3	16
CYTEC INDUSTRIES	359.1	-2	714.4	-3	28.1	-19	56.3	-14	7.8	9.4	24.7	10
DOW CHEMICAL	4619.0**	-5	9036.0	-7	412.0	-4	742.0	-13	8.9	8.8	15.9	23
DUPONT	6994.0**	9	13289.0	5	846.0	7	1474.0	3	12.1	12.3	12.1	48
EASTMAN CHEMICAL	1122.0**	-4	2145.0	-7	43.0	-56	68.0	-60	3.8	8.3	7.9	29

ORATE SCOREBOARD

QY

SALES

PROFITS

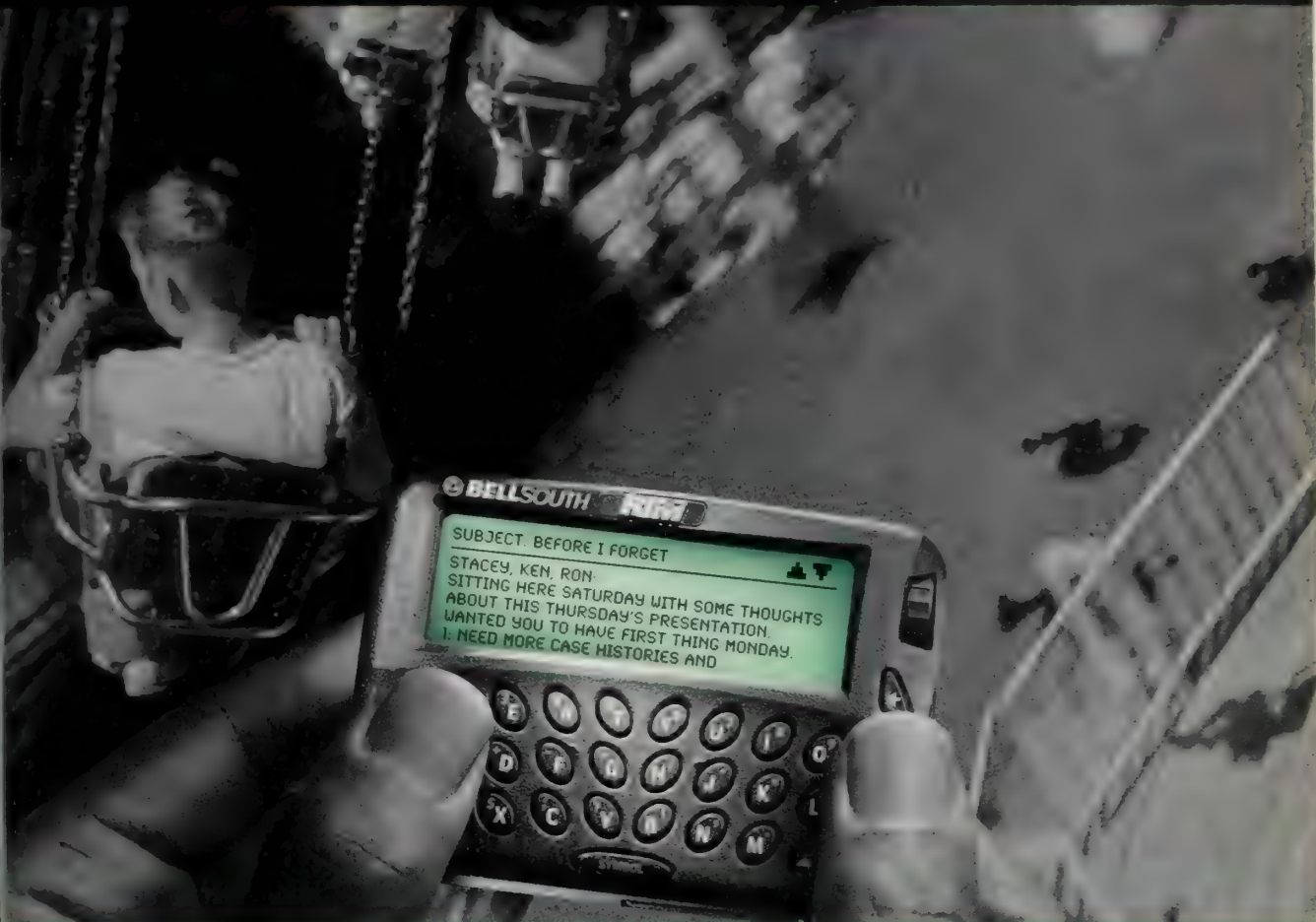
MARGINS

	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 %	6 MONTHS 1999 %	2ND QUARTER 1999 %	6 MONTHS 1999 %	2ND QUARTER 1999 %
H.B.) (1)	347.0	3	668.5	3	19.2	4	36.3	2	5.7	5.3	20.3	12	1.75
	348.2	2	675.4	3	10.0	11	17.6	2	2.9	3.3	4.7	6	1.8
	296.9	10	622.7	5	68.5	NM	79.6	651	23.1	1.5	36.9	9	3.45
V.R.)	374.1	1	718.5	1	31.4	23	51.4	38	8.4	6.9	NM	NM	1.71
KES CHEMICAL	374.8	-7	709.0	-4	42.8	13	73.8	34	11.4	9.4	7.0	35	1.28
W.A.)	594.3	0	1174.8	1	10.4	-20	18.1	36	1.7	2.2	3.7	36	0.48
IAL	765.4	-4	1534.8	15	52.2	-8	120.4	8	6.8	7.2	2.1	29	0.58
IONAL FLAVORS & FRAGRANCES	371.1	-2	738.8	0	27.4	-51	76.2	-36	7.4	15.3	17.5	31	1.52
	434.2	7	881.7	9	30.0	-25	69.1	-1	6.9	9.8	9.0	22	1.31
. CHEMICAL +	854.0	NM	1709.0	NM	-11.0	NM	-9.0	NM	NM	NM	-4.4	NM	-0.63
UM CHEMICALS	406.0	0	789.0	-2	17.0	-63	26.0	-72	4.2	11.3	6.8	18	1.30
IO	2586.0	23	4896.0	28	326.0	46	446.0	14	12.6	10.7	-4.7	NM	-0.35
	1149.0	-7	2267.0	-7	107.0	-1	215.0	2	9.3	8.8	19.9	18	2.62
IAAS	1144.0**	16	2084.0	8	-9.0	NM	101.0	-65	NM	18.2	16.6	27	1.52
IN (A.) (4)	250.5	-2	485.6	-2	11.3	-17	19.9	-19	4.5	5.3	14.0	13	1.47
3)	596.1**	62	1240.2	56	41.6	71	96.3	67	7.0	6.6	24.1	18	2.33
RBIDE	1418.0	-3	2820.0	-7	56.0	-53	127.0	-51	3.9	8.1	11.2	23	1.98
NGLOMERATES													
Y COMPOSITE	46804.7	11	87706.5	9	3787.2	17	6578.4	13	8.1	7.7	21.9	35	2.57
Y TELEDYNE	917.9	-10	1852.5	-8	57.3	-24	117.9	15	6.2	7.4	19.3	18	1.31
INAL	3818.0	-1	7414.0	-1	400.0	14	735.0	13	10.5	9.0	26.7	26	2.49
INTERNATIONAL	658.5	13	1253.6	9	12.2	47	19.9	13	1.9	1.4	7.2	27	0.70
	304.3	45	547.5	28	-2.7	NM	5.3	-91	NM	13.3	11.8	31	1.12
ELECTRIC	27410.0**	9	51575.0	8	2820.0	15	4975.0	15	10.3	9.8	25.6	39	2.99
T GENERAL (2)	1167.6**	13	2142.3	11	-23.6	NM	-43.1	NM	NM	NM	15.0	26	1.80
CE SOLUTIONS (3)	1385.5	-1	2758.1	-2	27.3	NM	50.1	NM	2.0	NM	0.8	NM	0.04
	299.9	4	578.2	5	-28.3	NM	-9.6	NM	NM	2.7	5.9	67	0.33
	412.7	27	794.6	26	67.9	317	89.0	NM	16.4	5.0	21.7	14	2.33
INTERNATIONAL	729.9	8	1414.3	9	39.4	22	67.5	20	5.4	4.8	14.9	16	2.30
	1606.0	0	3061.0	1	83.0	-27	105.0	-40	5.2	7.1	-1.1	22	1.11
	2887.0	16	5636.0	19	162.0	40	307.0	43	5.6	4.7	12.3	25	3.37
	4785.4	58	7882.3	29	139.8	11	111.4	-56	2.9	4.2	17.7	20	2.71
	422.1	-2	797.1	0	33.0	91	47.9	86	7.8	4.0	22.5	23	1.44
NSUMER PRODUCTS													
Y COMPOSITE	76824.3	5	151332.7	6	6231.8	1	11941.9	7	8.1	8.4	24.4	32	1.59
REL													
OMPOSITE	6979.3	-3	13748.9	-3	179.9	20	434.2	35	2.6	2.1	12.2	24	1.52
OE (11)	396.8**	-1	737.5	-4	6.3	63	8.9	NM	1.6	1.0	11.7	14	1.45
THE LOOM	551.7	-12	960.4	-12	-2.3	NM	-11.3	NM	NM	10.4	6.2	23	0.39
I (8)	628.4	6	1067.3	4	-31.0	NM	-29.1	NM	NM	3.7	0.4	NM	0.07
IRNE	607.7	8	1308.5	7	31.6	2	76.3	-1	5.2	5.5	16.5	15	2.61
	2182.3	-5	4359.1	-4	94.4	NM	218.6	NM	4.3	NM	13.9	35	1.57
VAN HEUSEN (11)	289.7	-2	616.3	-3	-4.6	NM	-4.0	NM	NM	NM	5.7	19	0.46
INTERNATIONAL	697.4	-8	1483.2	-10	4.6	-26	22.5	706	0.7	0.8	8.2	17	0.77
	260.4	4	493.6	-7	1.4	-78	-12.9	NM	0.6	2.4	-5.5	NM	-0.89
	1364.8	1	2723.1	2	79.6	-8	165.1	0	5.8	6.4	18.0	12	3.13
IANCES & HOME FURNISHINGS													
OMPOSITE	13723.2	10	29382.0	10	501.4	35	1112.2	29	3.7	3.0	16.7	37	1.19
NG WORLD INDUSTRIES	883.0	59	1712.1	56	72.8	30	121.1	18	8.2	10.1	1.2	NM	0.18
& BEYOND (10)	359.4	33	778.6	35	17.9	38	52.1	38	5.0	4.8	23.6	53	0.71
(10)	2386.2	23	5844.5	22	47.3	201	157.5	97	2.0	0.8	23.5	58	1.21
TY GROUP (10)	2204.9	15	5234.3	16	41.4	94	128.4	63	1.9	1.1	10.1	53	0.85
E BRANDS INTERNATIONAL	520.1	11	1054.0	8	27.6	31	55.3	29	5.3	4.5	24.1	13	2.07
VERS (10)	689.2**	3	1343.4	3	-70.5	NM	-97.7	NM	NM	1.5	-15.6	NM	-1.38
B)	365.8	14	683.9	14	22.8	14	40.5	29	6.2	6.2	15.9	19	1.24
PLATT	935.2	9	1822.8	11	72.4	14	138.5	14	7.7	7.4	17.8	21	1.32
THINGS	271.6	22	545.2	24	5.1	81	8.7	102	1.9	1.3	12.5	43	1.04
	1085.4	6	2191.6	6	88.2	30	175.2	25	8.1	6.7	59.0	21	3.50
ORTS (10)	261.0**	4	593.0	3	12.6	-18	40.9	-3	4.8	6.2	19.1	13	0.76
	886.7	-26	1776.9	-28	61.6	NM	117.5	591	6.9	NM	20.3	64	0.76
L	2616.0	1	5102.0	1	99.0	22	127.0	-15	3.8	3.1	16.1	20	3.77
SONOMA (11)	258.7	25	699.9	21	3.3	52	47.2	29	1.3	1.0	18.6	37	0.95
RAGES													
OMPOSITE	20858.0	3	39385.0	5	2281.4	-2	3685.3	-3	10.9	11.4	28.3	39	1.35
-BUSCH	3080.7	2	5765.9	5	431.0	10	750.1	14	14.0	13.0	30.9	27	2.75
MAN (8)	421.5	6	880.8	8	48.2	9	97.5	9	11.4	11.1	22.0	22	1.28
UA BRANDS (10)	530.2	69	989.6	66	10.8	-17	22.8	16	2.0	4.3	18.8	18	1.21
	5379.0	4	9807.0	7	942.0	-1	1689.0	-18	17.5	23.1	37.4	49	1.28

CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	PRICE/EARNINGS RATIO 7-23
	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
COCA-COLA BOTTLING CONSOLIDATED	261.0	8	481.3	8	6.2	-34	1.7	-76	2.4	3.9	104.6	52
COCA-COLA ENTERPRISES	3797.0	3	7066.0	6	34.0	-69	-27.0	NM	0.9	3.0	1.8	NM
COORS (ADOLPH)	575.6	6	1015.4	6	46.2	17	58.2	18	8.0	7.3	9.7	25
PEPSI BOTTLING GROUP	1831.0	9	3283.0	8	20.0	-13	17.0	0	1.1	1.4	NM	NM
PEPSICO	4982.0	-5	10096.0	5	743.0	50	1076.0	24	14.9	9.4	31.7	27
(D) PERSONAL CARE												
GROUP COMPOSITE	17411.7	3	33787.5	3	1155.1	-21	2670.8	-9	6.6	8.6	30.4	38
ALBERTO-CULVER (3)	500.4	7	987.8	7	22.7	7	42.7	5	4.5	4.5	15.6	18
AVON PRODUCTS	1258.1	1	2471.9	2	121.4	9	72.5	-10	9.6	8.9	241.3	47
COLGATE-PALMOLIVE	2285.0	1	4460.3	1	228.1	12	437.0	9	10.0	9.0	52.3	37
DIAL	430.4	17	829.3	18	29.4	15	55.3	14	6.8	7.0	27.3	30
ECOLAB	520.4	11	1009.7	12	43.4	15	78.4	15	8.3	8.0	23.9	35
GILLETTE	2414.0	4	4353.0	0	300.0	-19	569.0	-11	12.4	16.0	21.7	52
PROCTER & GAMBLE (6)	9450.0	2	18681.0	3	414.0	-40	1454.0	-12	4.4	7.4	28.7	34
REVLON	553.4	4	994.5	-7	-3.9	NM	-38.1	NM	NM	2.0	NM	NM
(E) TOBACCO												
GROUP COMPOSITE	17852.1	8	35029.2	8	2114.0	15	4039.4	26	11.8	11.1	23.5	17
PHILIP MORRIS	15567.0	5	30701.0	6	2030.0	17	3817.0	22	13.0	11.7	38.1	15
R. J. REYNOLDS TOBACCO HOLDINGS	1907.0	33	3600.0	36	-39.0	NM	-9.0	NM	NM	NM	-3.8	NM
UST	378.1	6	728.2	4	123.0	3	231.4	0	32.5	33.3	140.8	12
7 CONTAINERS & PACKAGING												
INDUSTRY COMPOSITE	11312.8	14	21912.0	16	502.3	-6	710.5	-18	4.4	5.4	4.6	60
(A) GLASS, METAL & PLASTIC												
GROUP COMPOSITE	4832.5	4	9152.1	7	254.0	-6	374.1	-7	5.3	5.8	4.7	43
BALL	979.0	52	1799.3	51	32.0	67	47.7	93	3.3	3.0	8.7	33
CROWN CORK & SEAL	1997.4	-11	3791.0	-8	99.6	-21	129.1	-23	5.0	5.6	2.0	65
OWENS-ILLINOIS	1423.1	3	2730.1	10	110.9	-4	180.2	-8	7.8	8.3	4.3	54
SILGAN HOLDINGS	433.0	10	831.7	14	11.5	13	17.1	1	2.7	2.6	NM	9
(B) PAPER												
GROUP COMPOSITE	6480.3	23	12759.9	24	248.3	-7	336.4	-28	3.8	5.1	4.5	70
ACX TECHNOLOGIES	259.0	1	501.6	2	11.3	-10	21.0	17	4.3	4.9	5.3	15
AVERY DENNISON	928.5	7	1862.4	9	63.7	11	82.1	-26	6.9	6.6	24.7	33
BEMIS	481.3	2	931.9	1	31.6	14	50.3	4	6.6	5.9	15.8	18
MAIL-WELL	439.0	25	879.5	32	15.0	33	29.8	43	3.4	3.2	10.9	24
ROCK-TENN (3)	329.6	3	641.8	-1	9.9	-16	18.7	-13	3.0	3.7	9.5	15
SEALED AIR	695.1	4	1374.1	25	51.2	44	97.8	56	7.4	5.3	8.3	NM
SMURFIT-STONE CONTAINER	1730.0	126	3435.0	125	-23.0	NM	-115.0	NM	NM	0.3	-21.5	NM
SONOCO PRODUCTS	611.8	-4	1172.2	-11	47.4	-36	91.3	-24	7.7	11.6	19.0	18
TEMPLE-INLAND	1006.0	7	1961.5	4	41.3	19	60.3	4	4.1	3.7	3.3	57
8 DISCOUNT & FASHION RETAILING												
INDUSTRY COMPOSITE	135998.2	13	296187.5	12	3712.0	17	10479.5	13	2.7	2.6	16.2	34
AMAZON.COM	314.4	171	608.0	199	-138.0	NM	-199.7	NM	NM	NM	NM	NM
AMES DEPARTMENT STORES (11)	829.1**	67	1701.8	34	-26.4	NM	-3.4	NM	NM	NM	3.2	92
ANN TAYLOR STORES (11)	249.4**	26	512.2	25	14.8	130	26.5	203	5.9	3.2	10.5	22
AUTOZONE (4)	970.2	30	1822.8	35	58.7	9	94.8	7	6.1	7.3	18.0	16
BARNES & NOBLE (11)	718.3	9	1747.6	8	-1.4	NM	104.6	57	NM	NM	13.8	18
BJ'S WHOLESALE CLUB (11)	879.7	14	1934.2	9	14.4	62	52.0	26	1.6	1.1	17.7	26
BORDERS GROUP (11)	618.7	13	1564.2	11	-4.1	NM	82.6	0	NM	0.7	11.8	14
BRADLEES (11)	318.0**	11	751.9	2	-23.5	NM	-122.7	NM	NM	NM	NM	NA
BUILDING MATERIALS HOLDING	256.0	13	471.6	15	7.0	48	9.6	71	2.8	2.1	10.5	8
BURLINGTON COAT FACTORY (7)	455.5	12	1042.5	7	5.9	11	29.1	-14	1.3	1.3	8.8	16
CDW COMPUTER CENTERS	597.6	46	1137.0	43	22.3	43	42.0	38	3.7	3.8	26.3	30
CHARMING SHOPPES (11)	259.0	6	531.2	2	4.8	NM	-4.4	NM	1.8	NM	1.2	NM
COLE NATIONAL (11)	266.6	-2	538.7	0	3.0	-50	-7.7	NM	1.1	2.2	7.6	11
CONSOLIDATED STORES (11)	923.7	12	2613.9	7	-3.7	NM	115.1	68	NM	0.1	8.8	17
CORPATE EXPRESS (11)	972.1	6	1935.4	10	10.0	-36	-31.7	NM	1.0	1.7	-0.8	NM
COSTCO (4)	6053.8**	13	12646.2	14	105.9	24	257.9	22	1.7	1.6	15.2	35
CSK AUTO (11)	269.4	13	517.5	16	9.9	NM	18.2	NM	3.7	NM	33.0	21
DAYTON HUDSON (11)	7214.0	12	17353.0	13	194.0	21	641.0	24	2.7	2.5	19.4	31
DILLARD'S (11)	2191.6**	27	4837.0	26	66.9	6	141.4	-19	3.1	3.6	4.8	25
DOLLAR GENERAL (11)	844.6	20	1837.6	17	36.3	20	114.4	20	4.3	4.3	23.4	40
DOLLAR TREE STORES	253.2	23	480.3	24	14.2	24	25.3	31	5.6	5.6	26.7	40
FAMILY DOLLAR STORES (4)	678.9	16	1431.1	17	41.8	33	83.4	42	6.2	5.4	19.8	29
FEDERATED DEPARTMENT STORES (11)	3707.0**	7	8914.0	5	87.0	45	495.0	13	2.3	1.7	12.2	16
GAP (11)	2277.7	32	5307.6	37	202.4	49	516.2	47	8.9	7.9	48.5	46
GOODY'S FAMILY CLOTHING (11)	259.9	15	623.5	11	7.9	1	15.9	-37	3.0	3.4	13.7	13
HOME DEPOT (11)	8952.0	26	16210.0	26	489.0	45	907.0	41	5.5	4.7	18.9	56
HOME BASE (11)	365.3	5	674.0	0	0.7	618	1.1	NM	0.2	0.0	6.0	11

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	PRICE-EARNINGS RATIO 7-23
	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
INSIGHT ENTERPRISES	365.2	54	703.4	58	7.9	68	14.7	63	2.2	2.0	16.4	31
INTIMATE BRANDS (11)	877.8	14	2409.0	11	46.4	13	292.3	46	5.3	5.3	137.2	28
JO-ANN STORES (11)	295.7	17	714.4	27	2.3	NM	23.4	40	0.8	NM	8.1	13
KMART (11)	8144.0	8	18545.0	7	67.0	43	420.0	80	0.8	0.6	8.9	15
KOHL'S (11)	910.3	22	2199.8	21	39.3	46	133.4	34	4.3	3.6	14.1	62
LANDS' END (11)	289.6	8	830.8	11	6.5	25	32.2	-31	2.2	1.9	13.0	44
LIMITED (11)	2104.8	5	5360.7	2	33.5	-58	284.0	72	1.6	4.0	88.9	5
LOWE'S (11)	3771.9	20	6687.6	21	125.0	24	231.2	33	3.3	3.2	12.5	39
MAY DEPARTMENT STORES (11)	3053.0**	8	7671.0	8	122.0	11	600.0	8	4.0	3.9	21.9	17
MICHAELS STORES (11)	388.5	16	929.7	10	5.2	-6	35.4	15	1.3	1.6	8.9	23
MICRO WAREHOUSE	575.5	10	1180.9	10	12.0	NM	24.3	414	2.1	NM	11.7	12
NEIMAN MARCUS GROUP (5)	611.8**	12	1400.9	12	35.2	47	65.8	14	5.8	4.4	14.6	11
NORDSTROM (11)	1066.3**	0	2534.6	-1	31.5	-2	98.1	7	3.0	3.0	15.8	22
OFFICE DEPOT	2343.0	13	4965.9	11	74.1	10	174.7	17	3.2	3.3	11.5	27
OFFICEMAX (11)	1179.4	11	2429.3	12	22.0	15	15.4	-74	1.9	1.8	4.6	24
PAYLESS CASHWAYS (1)	492.7	-3	884.6	-2	2.8	285	-7.1	NM	0.6	0.1	-3.4	NM
PAYLESS SHOESOURCE (11)	689.2	1	1257.6	1	35.3	-7	49.5	-10	5.1	5.6	18.8	15
PENNEY (J.C.) (11)	7569.0	7	16885.0	0	167.0	-4	374.0	-6	2.2	2.5	7.8	21
PEP BOYS-MANNY, MOE & JACK (11)	598.3	2	1161.5	7	10.1	0	-8.8	NM	1.7	1.7	0.8	NM
PETSMART (11)	564.1	14	1145.8	14	4.1	NM	23.5	408	0.7	0.0	7.4	34
ROSS STORES (11)	550.8	14	1180.8	12	34.2	23	79.7	16	6.2	5.8	32.7	17
SAKS (11)	1544.5**	9	3595.3	11	33.7	20	133.8	-65	2.2	2.0	1.5	NM
SEARS, ROEBUCK	9992.0	-3	19029.0	-3	331.0	-1	477.0	2	3.3	3.3	17.2	15
SHOPKO STORES (11)	759.9	18	1685.8	NA	4.3	101	44.9	NA	0.6	0.3	12.5	18
SPIGEL	752.0	10	1377.1	8	16.5	NM	6.5	NM	2.2	NM	7.0	27
SPORTS AUTHORITY (11)	357.0	3	816.0	6	-1.5	NM	-0.5	NM	NM	NM	-22.5	NM
STAGE STORES (11)	262.6	-4	619.9	-3	-2.3	NM	-5.2	NM	NM	3.3	-3.8	NM
STAPLES (11)	2072.1	24	4149.2	23	50.3	40	121.6	11	2.4	2.2	11.7	68
SYSTEMAX	413.8	25	835.5	21	5.2	-31	16.0	-22	1.3	2.3	12.6	9
TALBOTS (11)	293.0**	8	628.4	8	19.4	33	27.5	556	6.6	5.4	10.0	27
TIFFANY (11)	272.3	20	715.1	20	16.2	45	69.5	31	5.9	4.9	17.4	38
TJX (11)	1952.1	10	4234.5	5	127.7	45	254.6	37	6.5	4.9	38.7	23
TOYS 'R' US (11)	2166.0	6	7102.0	1	17.0	-11	327.0	-18	0.8	0.9	-3.7	NM
U.S. OFFICE PRODUCTS (8)	658.8	-3	1335.4	-1	-97.5	NM	-110.0	NM	NM	0.9	-41.2	NM
VENATOR GROUP (11)	1079.0	2	2411.0	-2	-11.0	NM	18.0	-84	NM	0.8	-1.5	NM
WAL-MART STORES (11)	34717.0	16	75502.0	16	1110.0	34	2669.0	26	3.2	2.8	21.4	42
WICKES	288.8	22	479.9	18	3.6	29	0.3	NM	1.2	1.2	16.1	12
ZALE (5)	280.7	9	848.7	9	6.3	317	70.2	16	2.2	0.6	11.4	18
9 ELECTRICAL & ELECTRONICS												
INDUSTRY COMPOSITE	47369.3	15	91936.6	14	3061.0	NM	6580.2	144	6.5	0.4	12.0	46
(A) ELECTRICAL PRODUCTS												
GROUP COMPOSITE	7253.6	19	13599.6	13	535.0	NM	979.1	200	7.4	NM	18.6	21
AMERICAN POWER CONVERSION	315.5	21	592.6	24	42.8	60	77.6	45	13.6	10.3	22.6	24
COOPER INDUSTRIES	957.5	1	1882.2	2	88.0	18	163.6	17	9.2	7.8	22.6	15
EATON	2300.0	34	3961.0	17	125.0	10	209.0	-5	5.4	6.7	16.0	21
HUBBELL	368.6	-1	736.1	3	43.1	-2	82.8	-1	11.7	11.9	20.0	16
NATIONAL SERVICE INDUSTRIES (4)	569.8	9	1080.2	8	30.5	9	55.3	7	5.4	5.4	19.0	14
ROCKWELL INTERNATIONAL (3)	1808.0	9	3509.0	5	150.0	NM	293.0	NM	8.3	NM	21.9	21
SMITH (A.O.)	262.8	16	520.1	16	13.9	10	25.3	11	5.3	5.6	11.3	15
SPX	671.4	67	1318.3	70	41.6	35	72.5	34	6.2	7.7	-5.2	NM
(B) ELECTRONICS												
GROUP COMPOSITE	18060.0	8	34950.2	12	580.2	NM	1104.4	NM	3.2	NM	5.8	65
GENERAL INSTRUMENT	527.0	8	1046.1	16	48.5	62	77.0	NM	9.2	6.1	8.6	49
HARRIS (6)	468.0	-2	913.4	NA	3.1	-48	NA	NA	0.7	1.3	7.9	56
HUGHES ELECTRONICS	1776.0	30	3227.8	21	-92.3	NM	-14.0	NM	NM	4.1	1.8	NM
L-3 COMMUNICATIONS HOLDINGS	314.4	36	590.0	41	11.1	98	18.3	123	3.5	2.4	8.4	30
LITTON INDUSTRIES (5)	1255.5	10	2386.4	13	50.9	9	94.8	8	4.1	4.1	14.6	17
MOTOROLA	7513.0	7	14745.0	6	206.0	NM	377.0	NM	2.7	NM	4.4	98
QUALCOMM (3)	1004.1	15	1936.5	18	58.9	909	16.3	-49	5.9	0.7	9.7	NM
RAYTHEON	5202.0	2	10105.0	5	294.0	9	535.0	11	5.7	5.3	8.2	27
(C) INSTRUMENTS												
GROUP COMPOSITE	4041.6	13	7688.6	9	231.9	4	388.0	-2	5.7	6.2	14.4	35
ALPINE GROUP '8)	513.6	288	954.3	182	5.1	-2	6.1	-6	1.0	3.9	25.8	19
BECKMAN COULTER	446.2	3	851.3	2	25.9	173	42.9	NM	5.8	2.2	46.9	18
HONEYWELL	2139.6	5	4125.7	4	140.3	12	245.8	11	6.6	6.2	20.1	26
TEKTRONIX (7)	541.3	-3	1011.9	-6	24.9	-42	39.4	-49	4.6	7.6	-8.2	NM
TERADYNE	400.9	-1	745.4	-11	35.8	-9	53.8	-40	8.9	9.7	6.1	95

PORATE SCOREBOARD

PANY

SALES

PROFITS

MARGINS

	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 %	CHANGE FROM 1998 %	6 MONTHS 1999 %	CHANGE FROM 1998 %	
MICROCONDUCTORS & OTHER COMPONENTS													
COMPOSITE	18014.1	21	35698.3	19	1713.9	81	4108.7	69	9.5	6.3	15.3	48	1.31
CEC MICRO DEVICES	595.1	13	1226.7	15	79.9	NM	48.5	NM	1.4	NM	5.3	NM	1.31
NOL	247.4	9	484.6	6	10.5	1	18.7	7	4.2	4.5	NM	22	1.31
3 DEVICES (2)	340.1	6	640.6	1	39.1	-11	69.0	-18	1.5	13.7	7.2	75	1.31
	311.1	8	601.2	10	15.4	NM	32.1	NM	5.0	NM	6.2	6.5	1.31
	343.2	18	661.8	11	17.4	0	25.0	-47	5.1	6.0	4.9	6.2	1.31
ANT SYSTEMS (3)	380.3	37	697.3	26	24.4	NM	32.0	NM	6.4	NM	-28.4	NM	-2.82
UP	280.1	26	527.6	15	12.3	101	21.2	NM	4.4	2.8	11.0	36	1.31
(2)	255.6	22	491.6	21	4.6	NM	6.6	NM	1.8	NM	9.1	NM	0.00
	6746.0	14	13849.0	16	1749.0	49	3748.0	53	25.9	19.8	28.9	30	1.31
IRCUIT (4)	522.5	69	1015.9	59	24.4	41	46.0	23	4.7	5.6	12.7	55	0.83
IG	501.0	49	964.6	44	9.8	-69	13.8	-78	2.0	9.3	-12.1	NM	-1.27
TECHNOLOGY (4)	863.8	41	1889.6	37	-27.7	NM	-5.2	NM	NM	NM	-3.6	NM	-0.58
(5)	445.9	12	872.0	8	50.0	9	95.0	3	11.2	11.5	11.9	30	1.14
AL SEMICONDUCTOR (7)	477.0	6	977.1	-16	-783.5	NM	-810.7	NM	NM	NM	NM	NM	-6.04
IA (3)	309.5	16	590.6	16	31.4	27	60.1	27	10.1	9.3	14.4	51	1.38
MODULAR TECHNOLOGIES (2)	257.9	42	521.9	36	12.8	-8	24.9	-18	5.0	7.7	15.1	20	0.99
RON (4)	2151.5	68	4059.6	65	75.7	54	141.2	44	3.5	3.8	16.1	61	1.03
STRUMENTS	2346.0	8	4385.0	1	325.0	656	558.0	933	13.9	2.0	13.6	62	2.26
S & BETTS	640.2	16	1241.7	13	43.3	4	81.3	3	6.8	7.5	8.8	29	1.57
FOOD													
RY COMPOSITE	75274.5	2	147051.5	2	2087.5	9	4343.1	3	2.8	2.6	14.6	36	0.91
FOOD DISTRIBUTION													
COMPOSITE	11634.2	1	22954.9	0	103.9	52	161.8	1	0.9	0.6	-10.5	NM	-1.22
ONS	259.2	-8	459.2	-9	7.5	17	7.5	35	2.9	2.3	13.3	8	1.41
3	3349.4	-4	7814.6	-3	-2.3	NM	-26.6	NM	NM	0.4	NM	NM	-14.94
ATIONAL MULTIFOODS (10)	588.8	4	1161.9	4	4.6	NM	11.6	NM	0.8	NM	10.2	17	1.38
MCH	936.0**	4	1870.7	-2	2.3	-37	3.5	-53	0.2	0.4	-27.5	NM	-3.84
JD HOLDINGS (8)	1211.1	21	2157.7	24	25.2	232	44.7	77	2.1	0.8	18.8	12	1.53
ALU (10)	5289.7	2	9490.6	0	66.7	29	121.1	17	1.3	1.0	15.4	14	1.70
FOOD PROCESSING													
COMPOSITE	40795.4	0	79549.1	-1	1470.0	6	3331.2	5	3.6	3.4	15.7	34	1.04
ANDS INTERNATIONAL (4)	311.8	-11	622.5	-9	13.5	297	21.3	294	4.3	1.0	10.4	13	3.43
DANIELS MIDLAND (6)	3192.2	-21	6570.4	-21	42.3	-33	54.0	-59	1.3	1.6	4.5	30	0.48
IDS	2154.9	1	4349.8	2	176.0	2	320.0	5	8.2	8.1	74.7	21	2.23
LL SOUP (5)	1492.0	-5	3324.0	-7	162.0	NM	381.0	49	10.9	NM	165.7	24	1.84
A BRANDS INTERNATIONAL	676.9	-9	1369.9	-6	7.3	-86	56.0	-40	1.1	7.1	-12.6	NM	-1.03
A (7)	6013.2	1	11706.5	3	-141.3	NM	30.1	-90	NM	2.9	12.3	36	0.75
ODUCTS INTERNATIONAL	441.3	20	837.9	19	21.7	103	37.5	101	4.9	2.9	6.3	19	1.67
ODS (7)	1000.5	21	1995.7	34	20.8	-16	24.1	-44	2.1	3.0	9.8	25	1.74
OD	1316.6	13	2505.0	15	47.4	-42	85.1	-19	3.6	7.1	-1.3	NM	-0.04
S GRAND ICE CREAM	306.9	9	535.2	8	8.2	81	4.9	NM	2.7	1.6	-61.9	NM	-1.56
AINS (9)	449.6	4	890.2	1	12.5	15	12.6	-32	2.8	2.5	6.2	30	0.93
. MILLS (7)	1600.5	3	3095.6	4	104.8	14	245.9	10	6.5	5.9	325.5	25	3.40
I.J.) (8)	2466.9	0	4749.0	1	-91.3	NM	29.2	-92	NM	7.3	26.3	37	1.29
F FOODS	853.2	-3	1798.4	-9	50.1	4	274.7	123	5.9	5.4	47.6	17	3.42
FOODS (2)	791.1	2	1590.1	0	31.8	21	74.2	1	4.0	3.4	16.7	20	1.90
	3478.5	4	6576.1	0	66.2	96	123.1	160	1.9	1.0	18.4	8	3.00
TIONAL HOME FOODS	512.6	27	1026.8	30	26.1	24	58.6	45	5.1	5.2	54.1	38	0.48
ATE BAKERIES (7)	825.0	5	1856.4	6	30.0	-12	59.6	-7	3.6	4.3	20.9	14	1.74
	1784.4	4	3529.7	5	154.2	8	273.0	-13	8.6	8.4	49.1	30	1.13
ICK (1)	468.2	8	909.7	7	5.8	-64	24.0	-26	1.2	3.7	27.2	25	1.30
FOODS	258.0	6	511.4	5	11.7	4	20.2	3	4.6	4.6	16.8	12	1.91
GROUP HOLDINGS	2023.0	-5	3878.0	-5	38.0	NM	48.0	NM	1.9	NM	-5.3	NM	-1.27
HOLDINGS	2023.0	-5	3878.0	-5	65.0	NM	101.0	NM	3.2	NM	4.7	1	1.31
S PRIDE (3)	344.2	5	674.1	3	18.3	55	32.9	77	5.3	3.6	24.8	9	1.31
HI-BRED INTERNATIONAL (4)	1324.0	1	1624.0	0	361.0	-1	364.0	-2	27.3	27.8	16.8	1	1.31
OATS	1317.5	-5	2392.1	-3	172.0	204	258.7	150	13.1	4.1	287.9	21	3.08
PURINA (3)	1088.5	1	2218.7	2	57.2	-5	164.4	12	5.3	5.6	29.4	NM	1.31
ILD FOODS (8)	999.1	14	2034.8	3	26.7	29	81.7	84	2.7	2.4	18.2	14	2.32
KS (3)	423.8	27	799.6	27	24.6	212	42.6	95	5.8	2.4	10.7	51	1.31
OODS INTERNATIONAL (5)	320.6	0	677.3	-3	-140.1	NM	-128.3	NM	NM	NM	NM	NM	1.31
(WM.) JR.	537.4**	-2	1022.3	0	87.5	3	157.1	-2	16.3	15.5	25.7	32	2.59
FOOD RETAILING													
COMPOSITE	22844.9	7	44547.5	7	513.6	10	850.2	-4	2.2	2.2	17.4	33	0.85
ON'S (11)	4167.6	8	8338.9	9	13.1	24	327.5	15	1.4	2.9	1	1	1.31
(11)	406.7	-19	855.3	-24	0.6	NM	1.3	NM	0.1	NM	NM	NM	1.31
V	2509.2	7	4916.3	6	68.4	14	127.0	10	2.7	2.6	17.6	19	0.60

CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	PRICE EARNINGS RATIO 7-23
	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
GENERAL NUTRITION (11)	336.4	3	793.9	13	16.8	-45	31.6	-50	5.0	9.2	63.2	23
GREAT ATLANTIC & PACIFIC TEA (10)	3113.7	1	5540.0	-1	-19.5	NM	-108.1	NM	NM	0.6	-12.6	NM
HANNAFORD BROTHERS	854.3	3	1693.4	5	25.4	10	45.4	11	3.0	2.8	14.8	24
INGLES MARKETS (3)	452.9**	8	895.1	10	5.1	63	9.3	43	1.1	0.8	3.7	38
MARSH SUPERMARKETS (9)	394.3	9	768.4	10	3.3	8	6.2	7	0.8	0.8	9.3	9
PENN TRAFFIC (11)	615.0**	-14	1305.5	-11	-21.6	NM	-115.2	NM	NM	NM	NM	NM
RUDDICK (3)	636.6	3	1282.3	4	12.3	19	25.0	15	1.9	1.7	11.7	18
SAFEWAY	6337.0	13	12450.2	13	236.4	22	442.2	24	3.7	3.5	26.7	31
7-ELEVEN	2112.6**	13	3904.8	12	28.7	11	30.6	123	1.4	1.4	NM	13
SMART & FINAL	418.6	10	816.9	14	1.5	16	1.0	159	0.4	0.3	-3.7	NM
WEIS MARKETS	490.0	7	986.3	8	19.2	15	40.4	-7	3.9	3.7	9.0	20

11 FUEL

INDUSTRY COMPOSITE	103819.1	2	193836.5	-5	3964.1	-24	6948.0	-36	3.8	5.2	5.2	72
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(A) COAL, OIL & GAS

GROUP COMPOSITE	96604.0	5	178986.4	-3	3765.9	-17	6571.0	-30	3.9	5.0	5.6	66
AMERADA HESS	1430.0***	-11	2968.7	-14	77.4	NM	148.0	NM	5.4	NM	-10.3	NM
APACHE	281.6**	28	469.4	1	31.1	236	28.9	9	11.0	4.2	-7.8	NM
ARCH COAL	391.3	11	812.4	22	2.5	-84	0.1	NM	0.6	4.2	0.1	NM
ASHLAND (3) †	1811.0	5	3327.0	4	100.0	-19	187.0	24	5.5	7.2	8.4	17
ATLANTIC RICHFIELD	3047.0	19	5462.0	7	313.0	389	478.0	141	10.3	2.5	-4.7	NM
BURLINGTON RESOURCES	376.0	-9	725.0	-14	15.0	-35	5.0	-93	4.0	5.6	0.7	NM
CHEVRON	7487.0	11	12974.0	-3	350.0	-39	679.0	-37	4.7	8.5	5.5	66
COASTAL	1892.1	-2	3601.7	-7	93.3	2	227.8	5	4.9	4.8	13.6	18
CONOCO	6329.0**	12	11664.0	2	114.0	-47	197.0	-63	1.8	3.8	2.7	NM
CONSOL ENERGY	532.0**	-5	1110.5	-4	14.4	-64	40.0	-62	2.7	7.1	NM	8
CROWN CENTRAL PETROLEUM	281.4	-17	506.6	-24	-11.0	NM	-22.9	NM	NM	NM	-21.7	NM
EXXON	25823.0**	0	49348.0	-6	1205.0	-26	2225.0	-37	4.7	6.3	12.0	38
MOBIL	14246.0***	8	26429.0	-2	749.0	1	1213.0	-10	5.3	4.9	8.3	52
MURPHY OIL	450.5**	0	754.8	-15	15.7	-29	9.0	-76	3.5	4.9	-4.5	NM
OCCIDENTAL PETROLEUM	1647.0	7	2991.0	-8	12.0	-94	-45.0	NM	0.7	12.1	-2.0	NM
PHILLIPS PETROLEUM	3200.0	7	5800.0	-8	68.0	-57	138.0	-66	2.1	5.3	-0.6	NM
SUNOCO	2373.0***	8	4306.0	0	26.0	-72	45.0	-70	1.1	4.2	11.7	17
TEXACO	8269.0**	3	15459.0	-5	273.0	-20	472.0	-21	3.3	4.3	3.7	73
TOSCO	3678.4	16	6316.1	2	84.6	-16	112.5	-21	2.3	3.2	4.0	54
ULTRAMAR DIAMOND SHAMROCK	3385.8*	11	6111.5	5	48.4	NM	64.4	NM	1.4	NM	1.6	NM
UNION PACIFIC RESOURCES GROUP †	386.7**	-23	801.8	-12	15.3	NM	57.6	NM	4.0	NM	-96.2	NM
UNOCAL	1555.0**	11	2786.0	7	9.0	-91	16.0	-87	0.6	7.5	1.1	NM
USX-MARATHON GROUP	5447.0*	-1	10287.0	-4	134.0	-17	253.0	-27	2.5	2.9	5.0	45
VALERO ENERGY	1824.5	26	3161.6	12	-22.1	NM	-24.8	NM	NM	2.8	-9.8	NM
VASTAR RESOURCES	459.6	12	813.4	-1	48.3	47	67.3	-17	10.5	8.0	19.6	49

(B) PETROLEUM SERVICES

GROUP COMPOSITE	7215.1	-25	14850.1	-21	198.3	-71	377.0	-74	2.7	7.1	1.5	NM
BJ SERVICES (3)	253.1**	-31	522.7	-31	-16.1	NM	-27.5	NM	NM	9.0	-3.7	NM
COOPER CAMERON	385.0**	-23	769.0	-17	9.1	-80	19.9	-75	2.4	9.0	10.1	24
HALLIBURTON	3670.0**	-20	7594.0	-14	83.0	-66	164.0	-63	2.3	5.3	-7.3	NM
SCHLUMBERGER	2174.3	-29	4480.7	-27	127.3	-67	216.5	-72	5.9	12.6	5.7	72
SMITH INTERNATIONAL	389.7	-30	786.7	-31	-3.0	NM	3.6	-86	NM	NM	1.8	NM
WEATHERFORD INTERNATIONAL	343.1	-35	696.9	-37	-2.0	NM	0.5	-99	NM	NM	1.3	NM

12 HEALTH CARE

INDUSTRY COMPOSITE	97903.0	12	193719.5	13	8172.4	9	17482.0	9	8.3	8.6	22.7	40
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(A) DRUG DISTRIBUTION

GROUP COMPOSITE	29787.7	17	58796.2	16	630.5	56	1241.9	24	2.1	1.6	13.3	39
AMERISOURCE HEALTH (11)	2261.3	6	4437.2	2	20.0	21	40.4	23	0.9	0.8	49.7	22
BERGEN BRUNSWIG (3)	5503.3**	23	10511.8	23	32.8	21	71.2	55	0.6	0.6	4.2	64
BINDLEY WESTERN INDUSTRIES	2045.2	11	4020.2	6	9.0	10	17.9	14	0.4	0.4	6.3	34
CARDINAL HEALTH (6)	6550.1**	15	12983.5	18	149.5	26	231.4	2	2.3	2.1	13.2	41
CVS	4362.4	16	8602.9	17	162.6	904	327.2	121	3.7	0.4	18.8	33
LONGS DRUG STORES (11)	869.4	15	1788.5	15	16.4	15	39.7	12	1.9	1.9	10.1	20
RITE AID (10)	3624.5	20	7189.8	16	81.0	4	154.6	-22	2.2	2.6	4.8	41
WALGREEN (4)	4571.4	18	9262.4	16	159.3	27	359.5	21	3.5	3.2	18.4	44

(B) DRUGS & RESEARCH

GROUP COMPOSITE	34874.0	13	68854.1	14	5422.5	-3	11859.2	4	15.5	18.2	30.6	40
ABBOTT LABORATORIES	3243.2	6	6542.2	7	642.7	10	1309.2	11	19.8	19.1	40.7	27
ALLERGAN	378.9	14	700.0	15	46.9	35	81.9	NM	12.4	10.5	11.1	78
AMERICAN HOME PRODUCTS	3319.3	-1	6761.6	-4	398.7	-24	1053.6	-30	12.0	15.7	21.4	34
AMGEN	820.5	25	1566.0	24	267.6	24	514.8	28	32.6	32.9	35.0	41
BRISTOL-MYERS SQUIBB	4920.0	11	9774.0	10	952.0	14	2018.0	15	19.4	18.8	43.8	42
GENENTECH (OLD)	373.3**	51	673.2	37	-923.2	NM	-908.8	NM	NM	16.3	-15.8	NA

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	P/E RATIO 6-30
	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
LILLY (ELI)	2341.6	9	4597.2	8	576.4	17	1027.8	1	24.6	22.8	43.2	
MERCK †	8018.2	24	15554.8	24	1478.1	12	2777.7	12	18.4	20.3	41.6	
PFIZER	3779.0	14	7706.0	21	729.0	23	1544.0	37	19.3	17.9	26.1	
PHARMACIA & UPJOHN	1760.0**	6	3534.0	9	216.0	48	437.0	30	12.3	8.8	14.6	37
SCHERING-PLOUGH	2451.0	15	4637.0	15	547.0	20	1086.0	20	22.3	21.4	45.5	39
SIGMA-ALDRICH	318.4	8	651.4	8	44.4	8	89.0	4	14.0	14.0	13.7	1
WARNER-LAMBERT	3150.7	17	6156.7	23	446.9	36	828.9	33	14.2	12.3	40.1	40
(C) HEALTH-CARE SERVICES												
GROUP COMPOSITE	18695.3	1	37548.6	3	233.1	NM	931.4	76	1.2	NM	8.5	20
COLUMBIA/HCA HEALTHCARE	4161.0	-13	8816.0	-9	106.0	-39	428.0	9	2.5	3.6	10.5	2
EXPRESS SCRIPTS	996.7	23	1895.8	61	7.0	-27	20.6	6	0.7	1.2	7.7	58
HEALTH MANAGEMENT ASSOCIATES (3)	352.5	17	692.2	14	38.8	0	86.5	9	11.0	12.8	16.5	1
HUMANA	2505.0	2	4982.0	3	28.0	-46	12.0	-88	1.1	2.1	2.3	53
INTEGRATED HEALTH SERVICES	625.4**	-16	1245.8	-17	-4.6	NM	-11.2	NM	NM	5.9	3.3	
LABORATORY CORP. OF AMERICA HOLDINGS	429.5	7	847.4	7	19.9	55	34.0	54	4.6	3.2	22.1	1
OXFORD HEALTH PLANS	1050.8**	-12	2111.1	-13	-2.0	NM	12.3	NM	NM	NM	NM	NM
PACIFICARE HEALTH SYSTEMS	2475.0**	2	4947.1	2	68.9	41	142.9	58	2.8	2.0	10.9	1
PHYCOR	393.5	6	810.0	17	0.9	-94	3.7	-53	0.2	4.1	-14.3	NM
QUEST DIAGNOSTICS	394.0	7	775.9	6	13.1	47	20.5	32	3.3	2.4	5.5	25
TENET HEALTHCARE (7)	2942.0	14	5764.0	12	-137.0	NM	-13.0	NM	NM	NM	6.3	10
UNIVERSAL HEALTH SERVICES	513.1**	8	1033.2	10	23.0	13	53.1	15	4.5	4.3	13.6	1
WELLPOINT HEALTH NETWORKS	1856.8**	19	3628.0	15	71.1	117	142.2	42	3.8	2.1	25.2	16
(D) MEDICAL PRODUCTS												
GROUP COMPOSITE	14546.0	17	28520.6	17	1886.3	21	3449.5	12	13.0	12.5	17.1	54
BARD (C.R.)	257.8	-14	506.3	-15	28.2	-30	54.8	-16	10.9	13.4	44.5	11
BAUSCH & LOMB	453.3	11	843.2	10	28.9	207	43.9	NM	6.4	2.3	4.4	NM
BAXTER INTERNATIONAL	1793.0	9	3478.0	12	207.0	229	385.0	70	11.5	3.8	16.6	43
BECTON, DICKINSON (3)	873.0	5	1747.0	11	33.1	NM	123.2	50	3.8	NM	17.5	25
BOSTON SCIENTIFIC	726.0	49	1434.0	52	109.0	62	209.0	64	15.0	13.8	-11.0	NM
GUIDANT	603.5	24	1193.6	25	93.8	19	149.2	11	15.5	16.1	2.3	NM
JOHNSON & JOHNSON	6854.0	19	13492.0	17	1155.0	15	2283.0	13	16.9	17.4	23.4	40
MEDTRONIC (8)	1119.0**	17	2157.9	22	158.0	-29	122.9	-52	14.1	23.1	12.8	91
OWENS & MINOR	772.4	-3	1513.4	-5	6.5	NM	12.0	73	0.8	0.0	14.8	16
ST. JUDE MEDICAL	290.7	11	557.4	7	37.2	-7	25.1	-64	12.8	15.3	10.4	39
STRYKER	523.3	96	1045.7	101	-3.7	NM	-24.5	NM	NM	13.2	-9.4	NM
SYBRON (3)	280.1	23	552.1	22	33.3	609	65.8	123	11.9	2.1	21.5	26
13 HOUSING & REAL ESTATE												
INDUSTRY COMPOSITE	23228.1	13	42843.1	14	1520.9	24	2381.4	26	6.5	6.0	19.0	15
(A) BUILDING MATERIALS												
GROUP COMPOSITE	12772.4	8	23356.0	8	1029.6	19	1507.1	17	8.1	7.3	20.4	19
AMERICAN STANDARD	1936.0	8	3610.0	10	90.0	15	137.0	20	4.6	4.3	NM	59
JOHNS MANVILLE	558.9	26	1054.6	26	80.4	24	118.1	30	14.4	14.6	25.6	10
LAFARGE	720.2	7	1090.0	8	88.6	4	59.6	31	12.3	12.6	18.0	9
MARTIN MARIETTA MATERIALS	328.9	18	569.9	23	41.3	13	49.2	26	12.6	13.1	18.8	21
NORTEK	544.1	21	950.8	13	19.8	133	23.3	138	3.6	1.9	21.2	8
OWENS CORNING	1310.0	2	2440.0	1	76.0	29	120.0	79	5.8	4.6	NM	NM
PPG INDUSTRIES	1947.0	-3	3750.0	-4	184.0	-8	307.0	-21	9.5	9.9	24.4	15
SHERWIN-WILLIAMS	1384.1	0	2511.9	1	107.6	8	136.4	9	7.8	7.2	17.9	17
SOUTHDOWN	333.4**	5	578.3	7	61.5	NM	91.0	NM	18.4	NM	27.0	11
TECUMSEH PRODUCTS	503.6	1	993.0	3	39.6	17	82.1	40	7.9	6.8	9.8	13
USG	895.0	15	1718.0	14	104.0	27	190.0	28	11.6	10.6	54.8	8
VALSPAR (2)	356.7	22	622.5	20	22.4	12	32.2	11	6.3	6.8	21.7	22
VULCAN MATERIALS	611.5	31	1093.8	33	62.7	-10	89.1	-16	10.3	15.0	20.4	20
WATSCO	331.0	22	578.4	30	11.2	27	13.5	28	3.4	3.3	9.6	15
YORK INTERNATIONAL	1012.1	14	1794.8	10	40.5	-4	58.7	3	4.0	4.8	18.1	13
(B) CONSTRUCTION & REAL ESTATE												
GROUP COMPOSITE	10455.6	20	19487.1	22	491.3	37	874.3	44	4.7	4.1	17.6	8
BEAZER HOMES USA (3)	370.4	58	697.8	53	10.3	82	18.3	95	2.8	2.4	14.8	6
CENTEX (9)	1372.2**	24	2917.3	30	58.4	21	126.6	37	4.3	4.3	20.2	9
CHAMPION ENTERPRISES	664.6	14	1289.3	23	29.2	13	50.4	16	4.4	4.4	22.1	8
FLEETWOOD ENTERPRISES (8)	947.8	13	1752.2	13	24.5	-13	45.8	-7	2.6	3.4	18.3	8
HORTON (D.R.) (3)	842.9	37	1542.0	45	44.4	92	77.8	83	5.3	3.8	18.6	7
HOTEL MARRIOTT	341.0	-60	648.0	-61	61.0	-2	106.0	18	17.9	7.3	15.7	12
KAUFMAN & BROAD HOME (1)	862.3	60	1556.4	62	28.6	66	44.8	77	3.3	3.2	17.5	9
LENNAR (1)	738.4**	39	1329.0	37	39.6	55	67.5	61	5.4	4.8	22.8	7
M.D.C. HOLDINGS	398.1	31	694.9	27	25.0	98	38.7	89	6.3	4.1	22.1	7
NVR	508.9**	27	955.5	36	28.3	82	54.3	106	5.6	3.9	49.0	8
OAKWOOD HOMES (3)	441.3**	0	837.6	19	7.9	58	17.5	39	1.8	1.1	9.4	10

PRIVATE SCOREBOARD

PAGE 1

	SALES				PROFITS				MARGINS				RANK LAST YEAR	CHANGE RANK
	2ND QUARTER 1999	CHANGE FROM 1998	% CHG.	2ND QUARTER 1998	2ND QUARTER 1999	CHANGE FROM 1998	% CHG.	2ND QUARTER 1998	2ND QUARTER 1999	CHANGE FROM 1998	% CHG.			
	\$ MIL.	\$ MIL.	%	\$ MIL.	\$ MIL.	\$ MIL.	%	\$ MIL.	\$ MIL.	\$ MIL.	%			
DUPLICATE	844.2**	23	1516.5	26	37.1	57	61.5	77	4.4	3.5	13.0	8	2.88	
PACIFIC	502.4	18	906.4	19	17.6	55	37.7	10	3.8	2.1	15.2	8	3.89	
RIERS (2)	309.7	102	524.8	109	16.2	60	30.1	101	5.2	6.6	18.9	6	2.59	
ON	342.7**	37	615.5	22	22.1	41	39.1	23	5.4	5.3	16.7	9	2.45	
(D) (6)	459.9**	25	860.5	23	17.5	30	32.0	-3	3.8	3.7	12.0	7	4.52	
	518.9**	31	843.3	30	23.7	35	36.2	44	4.6	4.4	14.4	7	3.11	
RECREATION INDUSTRIES														
COMPOSITE	34995.0	12	67426.1	13	2490.8	21	4395.6	15	7.1	6.6	12.6	29	1.16	
PLACES														
COMPOSITE	9974.1	18	19064.0	19	901.4	40	1570.4	31	9.0	7.7	24.8	27	1.36	
(5)	385.5	21	753.5	18	14.7	41	31.8	-29	3.8	7.8	12.0	11	1.51	
RESTAURANTS (11)	595.7	13	1027.1	20	19.1	-16	32.1	-9	3.2	4.3	11.7	10	1.32	
RESTAURANTS (7)	914.0	-1	1780.9	3	51.1	28	89.4	28	5.6	4.3	14.6	21	0.99	
(3)	342.4**	22	664.4	13	17.4	38	42.4	-10	5.1	4.5	39.3	15	1.79	
RIOTT SERVICES	350.0	8	658.9	10	6.6	6	2.5	9	1.9	1.9	NM	14	0.69	
(3)	3407.1	7	6442.2	11	518.1	45	920.8	28	15.2	11.2	19.3	34	1.24	
TEAKHOUSE	401.8	17	780.0	17	30.9	25	58.9	25	7.7	7.2	18.6	27	1.43	
RIOTT SERVICES (4)	1163.0	NA	2253.0	NA	15.0	NA	26.0	NA	1.3	NA	NM	NA	NA	
BAL RESTAURANTS	1886.0	-6	3699.0	-6	179.0	60	285.0	72	9.5	5.6	NM	12	3.53	
TERNATIONAL	528.6	0	1005.1	2	49.5	9	81.5	17	9.4	8.6	12.4	29	1.07	
RECREATION														
COMPOSITE	10783.8	10	21291.9	11	555.5	112	967.3	25	5.2	2.7	5.8	44	0.66	
(LT) (3)	5522.0	5	11032.0	5	367.0	-12	593.0	-26	6.6	7.9	7.4	37	0.72	
ENTERTAINMENT	751.1	57	1462.8	64	47.9	29	85.3	38	6.4	7.7	10.2	17	1.26	
RESORT GROUP (11) †	449.3**	34	785.2	23	17.1	-21	31.7	42	3.8	6.5	7.0	20	0.87	
†	319.1	72	570.4	56	24.1	67	42.6	39	7.6	7.8	6.4	34	1.43	
ENTERTAINMENT	739.0	5	1487.0	10	40.0	-2	87.0	9	5.4	5.3	3.2	26	0.41	
	3003.3	8	5954.4	9	59.3	NM	127.7	NM	2.0	NM	3.0	NM	0.41	
HOTEL & MOTEL														
COMPOSITE	3213.3	18	6169.3	21	231.0	5	408.5	6	7.2	8.1	17.8	21	1.19	
ELS	539.0	18	1014.0	23	66.0	2	108.0	5	12.2	14.2	81.7	18	0.73	
INTERNATIONAL	2042.0	6	3937.0	8	114.0	13	214.0	13	5.6	5.2	14.9	24	1.56	
MOTELS & RESORTS	345.2**	740	671.1	842	5.3	137	6.8	127	1.5	5.4	13.0	14	0.27	
MOTEL	287.1	-1	547.3	0	45.7	-12	79.7	-10	15.9	18.0	12.6	16	1.75	
LEISURE														
COMPOSITE	11023.7	7	20900.9	8	802.9	-14	1449.4	-1	7.3	9.1	17.3	24	1.73	
GREETINGS (10)	458.8	-6	1058.5	-3	10.8	-68	68.8	-22	2.4	6.9	11.8	14	2.22	
	1175.2	6	2258.2	12	82.4	-1	140.0	-2	7.0	7.5	13.0	15	1.89	
(1)	796.1	20	1544.4	27	203.3	27	361.1	33	25.5	24.3	17.7	30	1.54	
DOAK	3610.0	2	6710.0	4	491.0	-1	682.0	-5	13.6	14.0	34.9	17	4.15	
IDSON	617.8**	18	1179.0	19	68.6	24	127.6	27	11.1	10.6	21.8	36	1.55	
	874.6	53	1543.0	46	32.3	492	46.1	248	3.7	1.0	12.5	23	1.16	
	354.2	14	695.4	5	10.7	NM	14.2	NM	3.0	NM	9.5	16	1.65	
	1040.2	1	1919.1	0	-204.3	NM	-199.3	NM	NM	0.4	1.7	66	0.36	
STORES	381.1	4	782.9	3	1.5	NM	2.9	NM	0.4	NM	72.2	8	1.36	
DUSTRIES	324.3	18	562.1	16	15.1	4	24.2	6	4.7	5.3	22.1	32	1.28	
	486.8	5	865.8	1	14.8	22	-16.0	NM	3.0	2.6	-17.8	NM	-1.39	
BBEAN CRUISES	617.7	-6	1227.7	-7	85.3	7	175.5	12	13.8	12.2	14.3	24	1.93	
LD ENTERTAINMENT (11)	287.0	14	554.8	12	8.6	NM	22.4	-5	NM	0.9	6.9	22	0.59	
MANUFACTURING														
COMPOSITE	57866.2	3	111946.7	3	1917.9	-48	3973.6	-34	3.3	6.5	12.2	32	1.68	
AL MANUFACTURING														
COMPOSITE	19131.4	10	37090.9	10	34.9	-97	973.3	-59	0.2	7.2	11.2	36	1.45	
	248.7	4	452.1	5	6.3	29	6.6	9	2.5	2.1	5.1	28	1.02	
	425.8	8	815.8	8	28.0	14	49.8	14	6.6	6.2	20.4	16	2.97	
	1031.2**	19	1933.3	16	121.8	115	208.3	75	11.8	6.5	21.0	42	1.73	
	611.2	8	1186.1	9	39.3	8	73.0	10	6.4	6.5	21.2	12	2.10	
	741.8	1	1496.4	8	63.0	21	118.1	23	8.5	7.1	14.1	39	1.46	
Y INTERNATIONAL (5)	248.8	15	471.2	15	8.2	38	14.0	67	3.3	2.7	5.5	NM	0.03	
SNAL	265.4	6	518.7	8	13.7	-14	26.7	0	5.2	6.4	18.3	16	1.31	
	275.2	-2	544.6	1	8.5	-32	18.9	-26	3.1	4.4	11.9	18	1.07	
BRANDS	1314.1	8	2509.7	8	117.9	NM	-119.8	NM	NM	7.2	-24.3	NM	-5.85	
	410.7**	6	835.3	-3	23.8	-28	38.6	-33	5.5	7.2	13.8	14	2.05	
	292.7	7	608.9	15	4.3	-78	9.5	-74	1.5	7.3	7.4	14	0.64	
LD INDUSTRIES (1)	524.0	3	1040.0	5	35.0	-22	80.0	-9	6.7	8.9	19.1	16	2.63	
NAL GAME TECHNOLOGY (3)	258.9	16	479.7	18	37.5	-18	71.4	-12	14.5	20.4	42.5	14	1.46	
NTROLS (3)	4191.0	31	8071.8	30	111.1	32	209.4	54	2.7	2.6	21.8	15	4.57	
	303.2	1	469.5	1	39.0	4	47.1	-2	12.9	12.6	60.0	16	1.19	

CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	PER. RANK
	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
MINNESOTA MINING & MFG.	3863.0	2	7639.0	2	476.0	23	860.0	9	12.3	10.2	21.6	25
NEWELL RUBBERMAID	1597.3	2	3113.5	5	30.1	-79	-48.9	NM	1.9	9.1	4.1	30
PARKER HANNIFIN (6)	1285.3	4	2541.1	4	92.3	2	168.9	-3	7.2	7.3	16.7	18
TELEFLEX	421.1	16	813.3	15	25.9	22	48.9	19	6.1	5.9	16.4	21
TOWER AUTOMOTIVE	530.7	14	1029.3	12	32.6	37	60.7	43	6.1	5.1	15.7	19
TUPPERWARE	271.3	-4	522.2	-5	14.3	-38	32.1	-16	5.3	8.1	50.5	2
(B) MACHINE & HAND TOOLS												
GROUP COMPOSITE	4080.9	0	8015.4	2	206.5	-6	353.7	NM	5.1	5.4	16.7	21
BLACK & DECKER	1084.2	-7	2062.7	-5	70.7	21	109.9	NM	6.5	5.0	43.5	2
KENAMETAL (6)	458.6	8	937.7	-6	15.5	-34	17.7	-60	3.4	4.7	5.3	20
LINCOLN ELECTRIC HOLDINGS	273.5	-12	556.4	-9	23.3	-8	27.6	-44	8.5	8.1	17.1	19
NACCO INDUSTRIES	644.7	5	1258.2	4	16.3	-38	29.2	-42	2.5	4.3	15.5	8
SNAP-ON	486.3**	6	959.9	6	25.0	10	57.2	1	5.1	4.9	-0.5	NM
STANLEY WORKS	685.5	-1	1369.2	0	25.3	-40	55.6	-29	3.7	6.1	16.9	23
TEREX	448.1	34	871.4	47	30.4	48	56.4	61	6.8	6.2	39.0	8
(C) SPECIAL MACHINERY												
GROUP COMPOSITE	29759.5	0	57253.7	-1	1492.7	-29	2334.9	-43	5.0	7.1	12.1	33
AGCO	683.5	-16	1245.1	-18	15.5	-52	8.3	-87	2.3	4.0	0.4	NM
APPLIED MATERIALS (2)	1117.6	-5	1860.1	-25	141.6	0	194.5	-47	12.7	12.0	3.6	NM
CASE	1470.0**	-15	2671.0	-14	36.0	-71	-12.0	NM	2.4	7.3	-7.6	NM
CATERPILLAR	5101.0	-9	9968.0	-4	283.0	-37	488.0	-44	5.5	8.0	21.4	20
CUMMINS ENGINE	1667.0	2	3172.0	1	58.0	9	82.0	37	3.5	3.2	0.1	NM
DEERE (2)	3468.4**	-15	5927.0	-14	150.1	-59	199.8	-65	4.3	9.0	15.6	14
DOVER	1077.9	7	2047.6	6	93.3	10	162.5	3	8.7	8.4	15.1	28
FMC	1070.4	-5	2045.1	-5	68.9	2	99.2	5	6.4	6.0	28.5	12
HARNISCHFEGER INDUSTRIES (2)	489.4	2	954.3	-9	-74.3	NM	-90.7	NM	NM	NM	-29.6	NM
ILLINOIS TOOL WORKS	1624.2	14	3098.0	12	199.8	14	364.2	12	12.3	12.4	19.8	27
INGERSOLL-RAND	2249.3	3	4332.6	3	166.6	18	287.7	20	7.4	6.4	20.1	18
ITT INDUSTRIES	1191.7	6	2283.4	3	63.3	110	105.8	110	5.3	2.7	-3.1	NM
METTLER-TOLEDO INTERNATIONAL	257.5	13	493.2	11	13.5	18	21.5	18	5.2	5.0	64.2	30
MILACRON	401.0	8	793.0	9	15.3	-16	30.4	-9	3.8	4.9	15.9	9
PENTAIR	507.2	8	977.7	4	28.3	16	30.5	-37	5.6	5.2	12.4	23
TIMKEN	636.1	-9	1261.5	-10	12.3	-68	28.8	-67	1.9	5.5	5.3	20
TORO (2)	433.1**	14	683.9	16	24.1	20	24.9	31	5.6	5.3	3.5	48
TYCO INTERNATIONAL (3)	5819.8	18	12452.4	14	194.0	-52	302.5	-68	3.3	8.1	12.7	37
UNQVA	494.4	43	987.8	46	3.4	-64	6.8	-60	0.7	2.7	8.5	12
(D) TEXTILES												
GROUP COMPOSITE	4894.5	3	9586.7	2	183.7	115	311.7	38	3.8	1.8	15.5	18
BURLINGTON INDUSTRIES (3)	434.6	-15	838.5	-19	4.7	-82	-43.1	NM	1.1	5.1	-2.9	NM
COLLINS & AIKMAN	486.8	5	965.2	3	5.3	NM	7.6	-7	1.1	NM	NM	NM
DEXTER	256.1	-15	536.0	-10	13.7	-16	82.6	169	5.4	5.4	18.7	11
GALEY & LORD (3)	249.5	-9	486.9	-5	-5.9	NM	-7.0	NM	NM	1.7	-1.4	NM
INTERFACE	305.5	-4	613.3	-4	6.3	-46	11.9	-46	2.1	3.7	5.0	24
MOHAWK INDUSTRIES	790.8	15	1499.4	17	44.1	23	72.0	36	5.6	5.2	19.1	13
SHAW INDUSTRIES	1065.1	22	2020.9	16	68.1	NM	108.4	NM	6.4	NM	20.4	17
SPRINGS INDUSTRIES	544.9	1	1128.9	3	13.3	142	28.5	NM	2.4	1.0	8.5	12
UNIFI (6)	307.7	-14	602.5	-15	14.4	-59	15.5	-77	4.7	9.8	9.1	19
WESTPOINT STEVENS	453.5	4	895.0	7	19.6	24	35.2	28	4.3	3.6	NM	19
16 METALS & MINING												
INDUSTRY COMPOSITE	19693.0	-5	38088.4	-7	439.1	-39	804.7	-51	2.2	3.5	5.2	40
(A) ALUMINUM												
GROUP COMPOSITE	5782.5	-1	11380.0	-1	256.9	166	580.1	58	4.4	1.6	14.8	22
ALCOA	4032.7	12	8017.4	14	240.0	16	461.1	11	6.0	5.8	14.8	25
MAXXAM	588.8	-16	1133.6	-17	-18.1	NM	94.0	557	NM	1.8	118.0	8
REYNOLDS METALS	1161.0**	-26	2229.0	-28	35.0	NM	25.0	NM	3.0	NM	11.8	17
(B) STEEL												
GROUP COMPOSITE	8934.3	-9	17225.9	-11	174.6	-63	225.2	-74	2.0	4.8	5.9	22
AK STEEL HOLDING	682.6	12	1314.8	10	19.9	-40	47.5	-23	2.9	5.5	10.5	14
ARMCO	468.2	4	876.1	-2	33.8	9	59.0	15	7.2	6.9	745.9	8
BETHLEHEM STEEL	984.8	-17	1944.3	-16	-29.7	NM	-55.3	NM	NM	3.2	-5.7	NM
CARPENTER TECHNOLOGY (6)	265.9	-16	537.7	-17	11.5	-56	12.7	-74	4.3	8.2	5.8	18
COMMERCIAL METALS (4)	582.2	-4	1132.7	-4	11.0	-3	19.4	-2	1.9	1.9	11.3	11
LTV	1014.0	-7	2002.0	-10	-58.0	NM	-87.0	NM	NM	0.4	-9.1	NM
NATIONAL STEEL	707.3	-5	1365.2	-6	-4.6	NM	-28.7	NM	NM	3.5	2.8	17
NUCOR	997.2	-12	1891.0	-17	50.6	-30	78.8	-43	5.1	6.4	9.8	22
RYERSON TULL	708.1	-2	1399.5	-5	10.3	-34	20.1	-37	1.5	2.1	5.2	17
TEXAS INDUSTRIES (7)	294.5	-12	547.3	-11	30.3	-14	42.2	-23	10.3	10.5	14.7	9
USX-U.S. STEEL GROUP	1304.0	-25	2515.0	-27	55.0	-60	46.0	-79	4.2	7.8	8.7	15

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	PRICE EARNIN RATIO 7-23
	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL.	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL.	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
WALTER INDUSTRIES (7)	430.4	-3	783.0	-5	16.0	4	22.9	36	3.7	3.4	15.6	13
WORTHINGTON INDUSTRIES (7)	495.3	11	917.4	9	28.5	12	47.6	7	5.8	5.7	11.6	17
(C) OTHER METALS												
GROUP COMPOSITE	4976.1	-2	9482.5	-5	7.6	-95	-0.6	NM	0.2	3.0	-4.2	NM
ASARCO	490.7	-14	966.0	-19	-21.1	NM	-56.4	NM	NM	NM	-9.6	NM
COMMONWEALTH INDUSTRIES	271.5	5	510.3	1	6.6	NM	8.7	NM	2.4	NM	2.6	28
CYPRUS AMAX MINERALS	277.0	-36	560.0	-36	-34.0	NM	-78.0	NM	NM	NM	-6.6	NM
ENGELHARD	1202.7	12	2276.0	11	56.2	10	96.7	3	4.7	4.7	20.4	17
FREEMONT-MCMORAN COPPER & GOLD	470.3	8	886.2	7	27.5	-21	54.0	-23	5.9	8.0	NM	29
GENERAL CABLE	438.6	43	701.4	20	13.0	-28	21.1	-33	3.0	5.9	33.0	10
KAISER ALUMINUM	525.0	-15	1004.4	-17	-15.7	NM	-53.9	NM	NM	2.7	NM	NM
MUELLER INDUSTRIES	293.3**	30	581.2	28	25.4	29	47.1	21	8.7	8.7	15.3	16
NEWMONT MINING	315.8	-16	642.9	-15	7.1	-71	17.0	-69	2.2	6.6	-27.4	NM
PHELPS DODGE	691.1	-13	1354.2	-15	-57.5	NM	-57.0	NM	NM	5.1	-3.0	NM
17 NONBANK FINANCIAL												
INDUSTRY COMPOSITE	149886.8	8	293621.4	8	15700.6	15	31431.8	15	10.5	9.8	16.7	20
(A) FINANCIAL SERVICES												
GROUP COMPOSITE	94927.3	7	184821.3	8	9950.2	10	19741.8	15	10.5	10.2	19.7	23
AMERICAN EXPRESS	4820.0	12	9332.0	12	646.0	12	1221.0	18	13.4	13.5	23.8	27
ASSOCIATES FIRST CAPITAL	2989.4	30	5934.4	31	358.1	22	694.9	21	12.0	12.8	15.2	21
BEAR STEARNS (6)	2350.8	5	4155.7	0	269.1	56	473.0	40	11.4	7.7	17.2	10
BLOCK (H&R) (8)	1197.0	24	1488.5	28	298.3	15	295.5	21	24.9	26.8	22.4	24
CAPITAL ONE FINANCIAL	949.8	58	1827.5	56	87.5	31	169.9	28	9.2	11.1	22.3	31
CHICAGO TITLE	528.3	11	1017.8	16	30.1	181	53.3	67	5.7	2.2	23.4	7
CITIGROUP	20436.0	2	40957.0	4	2448.0	9	4937.0	12	12.0	11.2	14.7	27
COUNTRYWIDE CREDIT INDUSTRIES (10)	931.6	12	1467.4	-6	103.4	14	205.0	17	11.1	10.9	15.2	12
DAIN RAUSCHER	251.6	21	487.6	23	16.9	43	39.5	303	6.7	5.7	10.9	20
DONALDSON, LUFKIN & JENRETTE	2600.1	11	4798.9	4	165.7	16	287.3	4	6.4	6.1	13.4	20
DUN & BRADSTREET	497.3	3	988.2	3	66.4	68	126.8	39	13.4	8.2	NM	20
EDWARDS (A.G.) (10)	651.1	14	1246.3	14	84.5	11	160.4	8	13.0	13.3	17.9	9
EQUIFAX	442.6	12	864.1	16	52.1	3	96.0	1	11.8	12.9	87.5	25
FANNIE MAE	8938.0**	15	17596.6	16	958.0	13	1891.7	12	10.7	11.0	25.0	20
FIDELITY NATIONAL FINANCIAL	357.8	11	702.1	20	23.7	-29	43.5	-13	6.6	10.4	21.3	6
FINOVA GROUP	325.9	20	624.1	18	53.7	32	103.7	29	16.5	14.9	11.8	15
FIRST AMERICAN FINANCIAL	770.4**	6	1492.4	10	29.2	-37	53.1	-42	3.8	6.3	21.0	6
FRANKLIN RESOURCES (3)	566.8**	-16	1120.8	-17	123.3	-6	225.8	-12	21.8	19.5	16.6	23
FREDDIE MAC	5818.0	35	11445.0	38	557.0	35	1077.0	33	9.6	9.6	22.7	22
GOLDMAN SACHS GROUP (1)	6355.0	-3	12211.0	-2	340.0	-60	1347.0	-22	5.4	12.9	26.0	NA
HELLER FINANCIAL	373.0	12	737.0	10	58.0	14	115.0	16	15.6	15.3	11.6	14
HOUSEHOLD INTERNATIONAL	2251.5	0	4507.2	6	326.9	31	647.7	33	14.5	11.1	21.0	17
LANDAMERICA FINANCIAL GROUP	544.1	8	1034.0	36	17.1	-40	32.0	-4	3.1	5.7	14.0	5
LEGG MASON (9)	314.6	26	603.8	22	32.8	35	57.6	20	10.4	9.8	17.6	21
LEHMAN BROTHERS HOLDINGS (1)	4932.0	-11	9523.0	-6	330.0	2	540.0	6	6.7	5.8	13.5	11
MARSH & McLENNAN	2245.0	28	4596.0	30	177.0	-8	456.0	8	7.9	11.0	22.0	25
MERRILL LYNCH	8916.0	-7	17767.0	-6	673.0	23	1282.0	21	7.5	5.7	14.0	21
MORGAN STANLEY DEAN WITTER (1)	9054.0	7	17459.0	9	1151.0	35	2188.0	42	12.7	10.1	27.1	14
PAINWEBBER GROUP	1971.0**	4	3894.3	5	163.5	26	324.1	30	8.3	6.8	18.7	13
RAYMOND JAMES FINANCIAL (3)	324.4	18	623.6	15	23.5	3	45.4	-4	7.2	8.3	16.4	12
SCHWAB (CHARLES)	1158.2	45	2283.3	46	151.0	98	293.9	104	13.0	9.6	29.0	78
SLM HOLDING	769.9	-5	1491.9	-10	123.7	-14	237.5	-16	16.1	17.9	69.1	17
STEWART INFORMATION SERVICES	296.1**	26	544.0	26	11.7	4	21.3	7	4.0	4.8	18.0	6
(B) INSURANCE												
GROUP COMPOSITE	47625.6	9	94294.9	8	4757.0	34	9763.2	20	10.0	8.1	13.4	18
AETNA	5949.4**	23	11645.5	23	227.2	-14	406.6	-6	3.8	5.5	7.3	16
AFLAC	2032.0	19	4079.0	18	130.0	26	326.0	24	6.4	6.0	14.3	22
ALLEGHANY	339.3	46	615.4	40	20.9	22	36.8	22	6.2	7.4	5.7	19
ALLSTATE	6592.0	1	13399.0	3	770.0	-13	1805.0	-1	11.7	13.5	18.8	8
AMERICAN FINANCIAL GROUP	823.0	-19	1616.0	-19	45.0	11	104.1	-3	5.5	4.0	7.4	17
AMERICAN GENERAL	2713.0	6	5333.0	6	293.0	11	580.0	14	10.8	10.3	10.0	24
AMERICAN INTERNATIONAL GROUP	9469.4**	17	18598.3	18	1277.1	19	2475.8	19	13.5	13.3	14.3	31
AMERICAN NATIONAL INSURANCE	439.6	0	975.8	11	41.1	-13	152.2	34	9.3	10.8	8.1	8
CINCINNATI FINANCIAL	541.3	4	1078.0	5	86.2	47	150.7	5	15.9	11.3	4.6	25
COMMERCE GROUP	250.0	15	477.2	11	22.8	16	37.5	-16	9.1	9.0	13.4	11
CONSECO	2053.5	13	4019.4	6	297.5	NM	594.6	NM	14.5	NM	21.2	9
EVEREST REINSURANCE HOLDINGS	330.7	0	624.9	-1	38.1	-13	79.3	-5	11.5	13.2	11.4	10
HARTFORD FINANCIAL SERVICES GROUP	3349.0	-4	6648.0	-8	215.0	-9	453.0	-9	6.4	6.8	15.3	14
HARTFORD LIFE	1357.0	17	2692.0	5	114.0	21	220.0	24	8.4	8.1	17.5	17
LIBERTY FINANCIAL	298.5**	0	610.4	1	23.3	-22	50.7	-17	7.8	9.9	8.9	12
LINCOLN NATIONAL	1678.3**	11	3353.7	13	148.4	0	293.4	5	8.8	9.9	10.4	20

RATE SCOREBOARD

NY	SALES			PROFITS					MARGINS		PERCENT CHANGES		
	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	1999 1998	1999 1998	1999 1998	1999 1998	1999 1998
ESTMENT	250.5	5	492.5	3	112.9	19	213.4	23	45.2	24.8	23.1	14	1.1
SIVE	1524.7**	14	2934.7	13	112.1	-9	217.4	11	7.4	9.2	16.9	23	9.2
IVE LIFE	391.8	19	771.0	19	38.2	17	74.8	20	9.8	9.9	15.0	18	2.1
	1747.1**	4	3427.2	4	73.1	6	191.6	6	4.2	4.1	6.7	15	2.4
	1997.8	-6	3972.2	-5	221.1	NM	390.2	NM	11.1	NM	9.0	17	1.0
LANTIC HOLDINGS	438.8	3	867.9	8	59.3	-8	133.5	19	13.5	15.2	16.5	9	7.7
S PROPERTY CASUALTY	2634.8	4	5207.4	2	354.3	13	687.9	4	13.4	12.3	15.2	12	3.5
	423.9	14	851.3	7	36.5	1	88.7	21	8.6	9.7	26.2	6	6.2
INGS & LOAN													
U COMPOSITE	7334.0	10	14505.2	10	993.4	-9	1926.8	2	13.5	16.3	15.0	13	2.59
FINANCIAL	392.9	23	770.5	23	55.7	41	109.2	44	14.2	12.4	8.4	30	1.35
ITED (3)	276.3	10	545.1	11	24.8	4	49.9	-29	9.0	9.5	13.8	12	3.14
ONE FINANCIAL	492.2**	-1	975.2	1	92.5	17	180.6	18	18.8	16.0	16.7	15	1.79
CORP	487.5**	0	976.4	1	60.8	4	119.8	4	12.5	12.0	16.4	10	2.16
STATE BANCORP	1011.4	58	2009.4	59	83.6	-71	154.5	-54	8.3	45.0	14.2	12	1.85
VEST FINANCIAL	727.8**	-7	1458.1	-7	122.4	5	242.8	7	16.8	14.9	14.6	12	8.11
INT FINANCIAL	359.7**	22	720.2	20	59.9	29	94.9	36	16.7	15.8	8.4	18	1.91
NCIAL	262.4**	2	520.3	1	41.0	2	78.3	-2	15.6	15.7	19.1	15	1.90
TON MUTUAL	3323.7**	5	6530.0	6	452.7	14	896.8	17	13.6	12.6	16.8	13	2.77
FFICE EQUIPMENT & COMPUTERS													
Y COMPOSITE	125056.4	20	243113.9	19	10872.0	994	19596.9	165	8.7	0.9	23.0	48	1.29
NESS MACHINES & SERVICES													
COMPOSITE	14344.7	23	27721.5	22	389.7	-14	813.4	-8	2.7	3.9	17.5	24	1.42
OWER (4)	440.5	45	862.5	48	20.5	-8	39.8	2	4.7	7.4	6.3	44	0.62
IM SYSTEMS	802.6	34	1295.9	25	2.5	-41	0.2	-97	0.3	0.7	-4.3	NM	-0.17
	407.8	-14	821.9	-15	47.4	12	95.0	11	11.6	8.9	26.2	19	1.94
	297.0	6	580.5	1	31.6	NM	60.7	389	10.6	NM	17.3	16	1.80
STRIES	419.7	5	844.2	3	22.5	-4	34.1	-26	5.4	5.8	19.6	15	1.54
	253.7	3	462.9	-1	21.8	-13	40.2	-10	8.6	10.1	26.4	13	2.10
	1266.6	16	2521.8	15	-3.0	NM	-23.5	NM	NM	0.5	-10.4	NM	-0.17
E (2)	1656.5	25	3101.4	24	-147.3	NM	-145.3	NM	NM	NM	-93.7	NM	-6.92
ERMAN (7)	432.4	-7	853.9	-5	39.0	4	68.9	-1	9.0	8.0	67.8	15	1.67
	1572.0	0	2905.0	1	46.0	-4	49.0	2	2.9	3.1	8.4	39	1.22
JWES	1105.4	9	2154.2	9	157.4	19	296.0	16	14.2	13.1	38.7	30	2.17
S & REYNOLDS (3)	401.1	8	793.2	6	31.3	11	61.7	8	7.8	7.6	25.5	17	1.44
REGISTER	335.6	9	662.6	5	14.8	23	28.5	32	4.4	3.9	12.0	12	2.31
E (10)	691.8	3	1370.4	0	56.7	5	104.0	-3	8.2	8.0	14.7	12	1.46
A (11)	3877.2	77	7730.1	80	28.0	21	64.5	31	0.7	1.1	14.2	16	2.54
COMPUTER SERVICES (5)	384.7	2	761.0	3	20.6	13	39.6	2	5.4	4.8	12.6	15	1.67
PUTERS & PERIPHERALS													
COMPOSITE	71218.5	18	139119.1	17	6215.8	NM	10622.5	768	8.7	NM	26.0	36	1.67
MPUTER (3)	1558.0	11	3088.0	10	203.0	101	338.0	117	13.0	7.2	29.4	15	3.67
OMPUTER	9420.0	62	18839.0	64	-184.0	NM	97.0	NM	NM	NM	8.4	35	0.71
ERAL (3)	355.9	1	711.3	0	-3.1	NM	-1.5	NM	NM	NM	4.6	37	0.38
PUTER (11)	5537.0	41	10710.0	40	434.0	42	859.0	46	7.8	7.8	56.4	71	0.58
	1291.8	36	2419.8	36	288.9	52	509.6	52	22.4	19.9	24.9	69	0.90
	1912.1	18	4015.5	20	89.2	47	188.8	38	4.7	3.8	26.6	29	2.50
PACKARD (2)	12419.0	3	24356.0	2	918.0	34	1878.0	16	7.4	5.7	17.6	35	3.06
IONAL BUSINESS MACHINES	21905.0	16	42222.0	16	2391.0	65	3861.0	55	10.9	7.7	42.5	31	4.06
	348.8	-11	735.0	-8	-47.1	NM	-46.5	NM	NM	NM	-11.3	NM	-0.16
INTERNATIONAL GROUP	817.3	17	1604.3	17	74.5	38	142.3	38	9.1	7.7	56.6	31	2.01
	524.6	-1	1206.2	12	-30.9	NM	-13.9	NM	NM	1.0	7.5	20	0.25
ELECTRONICS (4)	327.7	-4	701.3	-16	7.0	18	11.1	-64	2.1	1.7	8.8	26	0.41
(9)	1083.2	-2	2392.0	0	8.3	175	65.0	NM	0.8	0.3	-1.8	NM	-0.15
TECHNOLOGY (6)	1643.0	4	3448.0	6	1020.0	NM	1102.0	NM	62.1	1.4	49.9	6	4.53
GRAPHICS (6)	828.6	7	1447.8	-2	157.8	NM	117.8	NM	19.0	NM	4.0	58	0.28
OSYSTEMS (6)	3514.6	22	6450.7	23	395.2	45	656.4	30	11.2	9.5	21.4	55	1.27
ECHNOLOGIES	274.1	15	533.8	18	27.8	18	52.1	21	10.1	9.8	17.9	35	1.08
	1886.4	9	3698.8	9	119.7	33	230.9	51	6.3	5.2	41.0	31	1.38
DIGITAL (6)	709.3	9	1377.8	-7	-101.5	NM	-215.8	NM	NM	NM	NM	NM	-5.51
	4862.0	3	9162.0	1	448.0	NM	791.0	NM	9.2	NM	40.3	16	3.58
PUTER SOFTWARE & SERVICES													
COMPOSITE	39493.3	22	76273.3	21	4266.5	95	8161.1	54	10.8	6.8	20.8	65	0.99
ONLINE (6)	1377.0	46	2630.0	55	160.0	NM	580.0	NM	11.6	0.8	1.1	NM	0.60
MANAGEMENT SYSTEMS	305.3	22	596.2	26	4.6	-62	20.4	-3	1.5	4.8	16.5	27	1.10
IN SYSTEMS (10)	349.5	-4	694.6	3	-22.5	NM	-35.3	NM	NM	NM	-10.2	NM	-0.66
DESIGN SYSTEMS	264.2	-16	599.4	-2	-3.0	NM	49.9	-14	NM	19.0	1.5	NM	0.02
	322.2	13	643.6	14	35.7	14	77.5	15	11.1	11.0	23.0	28	1.18

CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	P/E RATIO 7-2
	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
CISCO SYSTEMS (5)	3147.0	44	5974.0	42	646.0	894	934.0	79	20.5	3.0	19.0	NM
COMDISCO (3)	1302.0**	59	2251.0	41	36.0	-10	-20.0	NM	2.8	4.9	6.3	73
COMPUTER ASSOCIATES INTERNATIONAL (9)	1222.4	17	2851.4	13	-432.0	NM	26.0	NM	NM	NM	24.7	40
COMPUTER SCIENCES (9)	2063.4	18	4193.8	16	78.3	22	195.1	35	3.8	3.7	14.8	32
COMPUWARE (9)	443.1	31	943.2	35	90.7	54	214.7	59	20.5	17.4	45.0	28
DST SYSTEMS	299.6	11	592.4	11	33.4	43	67.0	41	11.1	8.6	7.8	47
ELECTRONIC DATA SYSTEMS	4615.7	10	8941.9	10	240.6	8	220.0	-46	5.2	5.3	9.9	58
FIRST DATA	1397.9	9	2667.5	7	193.3	326	334.3	90	13.8	3.6	16.6	35
FISERV	343.3	10	680.4	16	34.3	20	67.8	21	10.0	9.2	11.7	31
GALILEO INTERNATIONAL	398.8	5	802.8	6	62.3	15	140.3	21	15.6	14.2	24.1	27
INACOM	1455.5	-21	2821.9	-20	6.2	-48	-142.0	NM	0.4	0.6	-27.9	NM
INGRAM MICRO	6804.8	37	13530.1	34	50.3	-10	88.8	-21	0.7	1.1	13.3	22
KEANE	280.5	5	565.5	14	26.6	17	56.8	25	9.5	8.5	26.0	16
MICROSOFT (6)	5764.0	39	10856.0	37	2202.0	62	4119.0	53	38.2	32.7	28.3	64
NOVELL (2)	315.7	20	601.5	17	38.7	101	67.6	102	12.3	7.4	9.0	69
ORACLE (7)	2943.3	22	5022.2	21	527.4	31	820.7	33	17.9	16.7	34.9	42
PARAMETRIC TECHNOLOGY (3)	264.1	8	527.4	4	35.4	133	46.0	151	13.4	6.2	28.0	33
PEOPLESOFT	312.2	-3	617.6	3	3.0	-92	-168.5	NM	0.9	12.2	-20.5	NM
SABRE GROUP HOLDINGS	639.0**	11	1277.0	13	63.0	-9	156.0	11	9.9	12.0	23.6	33
SAFEGUARD SCIENTIFICS	809.4	34	1309.3	25	11.5	91	35.7	222	1.4	1.0	29.5	16
SHARED MEDICAL SYSTEMS	304.4**	18	591.5	15	19.6	8	37.9	5	6.4	7.0	17.1	20
SUNGARD DATA SYSTEMS	333.4	10	665.2	13	37.4	14	-5.7	NM	11.2	10.8	6.1	50
3COM (7)	1415.6	3	2826.1	8	87.5	38	177.3	129	6.2	4.6	12.6	23

19 PAPER & FOREST PRODUCTS

INDUSTRY COMPOSITE	26574.2	6	51524.2	4	1226.6	27	2210.9	28	4.6	3.9	8.9	34
(A) FOREST PRODUCTS												
GROUP COMPOSITE	5289.2	16	9770.8	12	326.7	24	473.4	71	6.2	5.8	7.5	33
GEORGIA-PACIFIC GROUP	3807.0	16	7159.0	11	212.0	607	311.0	576	5.6	0.9	11.6	24
LOUISIANA-PACIFIC	777.4	25	1380.5	18	84.9	-58	112.1	-37	10.9	32.7	-5.2	NM
RAYONIER	258.0	2	484.4	1	17.1	-7	32.2	-12	6.6	7.3	9.2	25
UNIVERSAL FOREST PRODUCTS	446.8	15	746.9	19	12.7	15	18.1	23	2.9	2.9	14.3	14
(B) PAPER												
GROUP COMPOSITE	21285.0	4	41753.4	2	899.8	28	1737.5	19	4.2	3.4	9.1	34
BOISE CASCADE	1678.0	9	3289.2	9	59.1	NM	77.9	NM	3.5	NM	7.4	25
BOWATER	527.4	33	1098.7	41	5.2	-72	111.7	156	1.0	4.8	2.6	NM
CHAMPION INTERNATIONAL	1301.2	-12	2575.8	-13	39.3	22	80.9	58	3.0	2.2	3.6	52
CHESAPEAKE	327.5	38	566.6	25	8.4	-21	16.9	-9	2.6	4.5	7.4	22
CONSOLIDATED PAPERS	435.1	-14	894.4	-13	10.1	-68	24.1	-66	2.3	6.2	4.5	44
FORT JAMES	1718.5	-1	3387.5	0	135.9	3	253.5	2	7.9	7.7	47.2	17
INTERNATIONAL PAPER	6000.0	3	12000.0	2	-58.0	NM	-26.0	NM	NM	1.8	0.7	NM
KIMBERLY-CLARK	3148.6	4	6273.8	3	391.1	49	767.4	47	12.4	8.6	37.1	23
MEAD	1004.8	-4	1868.0	-1	44.8	11	67.7	-8	4.5	3.8	5.8	34
POTLATCH	413.0	3	829.5	3	9.4	-7	10.0	-52	2.3	2.5	2.9	46
WESTVACO (2)	679.5	-6	1330.2	-7	27.3	-21	52.5	-22	4.0	4.8	5.4	27
WEYERHAEUSER	3044.0	14	5709.0	8	164.0	138	206.0	34	5.4	2.6	7.8	39
WILLAMETTE INDUSTRIES	1007.4	6	1930.8	5	63.3	164	94.9	106	6.3	2.5	6.6	40

20 PUBLISHING & BROADCASTING

INDUSTRY COMPOSITE	14623.7	7	27665.5	6	2938.2	-6	4092.2	10	20.1	22.8	10.7	47
(A) BROADCASTING												
GROUP COMPOSITE	2699.5	37	4915.7	22	546.2	-76	733.4	-64	20.2	NM	5.5	64
CLEAR CHANNEL COMMUNICATIONS	617.7	93	994.5	90	106.5	282	93.8	180	17.2	8.7	2.5	NM
COX COMMUNICATIONS	509.9	28	1008.4	24	505.8	NM	757.0	NM	99.2	NM	28.1	10
INFINITY BROADCASTING	597.0	31	1071.0	36	100.0	50	147.0	50	16.8	14.7	4.9	76
MEDIAONE GROUP	662.0	3	1327.0	-18	-176.0	NM	-287.0	NM	NM	NM	-7.1	NM
TV GUIDE	313.0	102	514.8	71	9.8	-45	22.6	-60	3.1	11.6	3.7	79
(B) PUBLISHING												
GROUP COMPOSITE	11924.2	2	22749.8	3	2392.1	183	3358.8	97	20.1	7.2	17.0	40
BELG (A.H.)	366.9	1	693.5	1	79.8	167	92.4	113	21.7	8.2	8.7	20
DOW JONES	510.6	-15	972.7	-20	57.2	NM	108.7	NM	11.2	NM	27.6	35
GANNETT	1343.3	3	2591.4	3	277.0	24	455.9	-19	20.6	17.1	21.7	24
KNIGHT-RIDDER	809.7	4	1580.5	4	86.6	29	149.5	-11	10.7	8.6	16.6	19
McCLATCHY	273.6	2	532.0	23	22.0	32	35.6	37	8.1	6.2	8.7	23
McGRAW-HILL	922.7	5	1639.2	3	90.0	16	114.5	17	9.8	8.8	23.0	29
NEW YORK TIMES	779.4	4	1518.4	3	83.5	1	144.9	-2	10.7	11.0	20.0	25
PRIMEDIA	426.3	9	837.4	14	-4.9	NM	-50.9	NM	NM	NM	NM	NM
SCHOLASTIC (7)	334.0	12	601.3	12	22.4	61	22.6	109	6.7	4.7	10.9	22
SCRIPPS (E.W.)	388.3	6	761.7	7	44.2	21	76.2	24	11.4	9.9	13.5	28
TIME WARNER	3574.0	-3	6840.0	0	593.0	487	731.0	NM	16.6	2.8	5.0	NM

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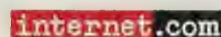
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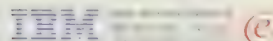
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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	P/E RATIO
	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
TIMES MIRROR	801.3	6	1547.3	5	85.3	86	134.1	46	10.6	6.1	21.3	
TRIBUNE	836.9	7	1556.8	7	888.0	501	1231.3	466	NM	18.8	63.5	
WASHINGTON POST	557.2	6	1077.6	7	67.9	6	113.1	-58	12.2	12.1	16.0	
21 SERVICE INDUSTRIES												
INDUSTRY COMPOSITE	57550.4	17	109868.0	17	2407.2	55	3939.0	31	4.2	3.2	13.2	27
(A) CONSTRUCTION & ENGINEERING GROUP COMPOSITE	6883.5	4	13661.6	4	-21.8	NM	17.5	-91	NM	1.4	2.8	74
FLUOR (2)	3091.3	-6	6475.4	-3	-72.9	NM	-21.8	NM	NM	1.7	7.1	3
FOSTER WHEELER	855.0	-17	1853.7	-10	5.4	-58	20.8	-20	0.6	1.2	-6.5	NM
JACOBS ENGINEERING GROUP (3)	771.9	47	1551.8	48	16.8	21	32.9	21	2.2	2.6	15.5	1
MORRISON KNUDSEN (1)	567.8	30	989.1	20	13.8	52	22.7	31	2.4	2.1	11.2	1
STONE & WEBSTER	310.3	-2	576.4	-6	6.2	855	-52.5	NM	2.0	0.2	-46.6	NM
TURNER	1287.2**	25	2215.2	14	9.0	119	15.4	101	0.7	0.4	27.3	12
(B) INDUSTRIAL DISTRIBUTION GROUP COMPOSITE	22869.2	23	43060.4	20	507.5	17	1049.1	16	2.2	2.3	12.0	26
ARROW ELECTRONICS	2250.0	11	4451.7	10	15.0	-58	43.4	-44	0.7	1.8	7.5	18
CAMERON ASHLEY BUILDING PRODUCTS (2)	268.7	36	492.1	39	3.5	27	3.4	1	1.3	1.4	13.3	8
CELLSTAR (1)	570.3	28	1085.7	27	14.0	-16	29.6	-4	2.4	3.7	6.7	32
DYNEGY	3160.8	-4	6205.7	-6	28.0	19	56.0	57	0.9	0.7	11.8	29
ENRON	9672.0	48	17304.0	41	222.0	53	475.0	32	2.3	2.2	10.3	36
GENUINE PARTS	2022.9	25	3924.3	24	92.6	8	178.6	8	4.6	5.3	17.7	16
GRAINGER (W.W.)	1146.2	2	2237.0	3	50.6	-15	106.8	-8	4.4	5.3	17.5	20
HUGHES SUPPLY (11)	711.3	18	1311.9	22	13.4	15	24.3	15	1.9	1.9	13.2	11
MARSHALL INDUSTRIES (7)	433.1	4	826.3	5	5.8	-12	8.5	-42	1.3	1.6	5.0	29
METALS USA	435.7	16	858.1	31	11.8	-3	22.5	16	2.7	3.2	12.2	11
PIONEER-STANDARD ELECTRONICS (9)	576.0	6	1135.2	16	7.7	38	17.2	33	1.3	1.0	11.6	13
PSS WORLD MEDICAL (9)	436.7	19	846.7	18	12.3	60	20.0	NM	2.8	2.1	10.7	15
RELIANCE STEEL & ALUMINUM	384.7	18	756.6	18	13.7	9	27.7	14	3.6	3.8	13.7	13
UNITED STATIONERS	800.8	6	1625.0	11	17.3	140	36.0	61	2.2	1.0	21.7	10
(C) POLLUTION CONTROL GROUP COMPOSITE	2248.4	14	4340.0	12	188.3	185	316.3	63	8.4	3.3	15.9	20
BROWNING-FERRIS INDUSTRIES (3)	1090.6	5	2118.5	-10	95.3	13	155.9	-12	8.7	8.1	24.5	23
IT GROUP	301.3	34	559.3	55	8.8	NM	14.6	NM	2.9	NM	8.5	18
REPUBLIC SERVICES	455.6	36	859.1	35	54.5	117	97.9	63	12.0	7.5	14.3	19
SAFETY-KLEEN (4)	400.9	10	803.1	49	29.7	NM	47.9	NM	7.4	NM	9.1	12
(D) PRINTING & ADVERTISING GROUP COMPOSITE	5159.2	7	9999.9	8	267.0	-13	450.4	-4	5.2	6.4	21.8	30
ADVO (3)	262.1	-3	515.5	-1	12.4	2	18.6	6	4.7	4.5	NM	12
BANTA	299.1	-5	608.4	-6	-26.7	NM	-17.0	NM	NM	4.2	2.9	69
BIG FLOWER PRESS HOLDINGS	431.6	5	851.9	7	8.5	2	11.3	20	2.0	2.0	22.6	17
DONNELLEY (R.R.)	1195.2	3	2375.0	2	52.5	-11	96.5	-6	4.4	5.1	18.0	16
INTERPUBLIC GROUP	1134.4**	10	2059.5	11	139.4	18	184.2	18	12.3	11.5	27.1	34
OMNICOM GROUP	1270.4	16	2417.2	21	107.1	24	172.7	26	8.4	7.9	31.7	41
WORLD COLOR PRESS	566.5	4	1172.4	7	-26.2	NM	-15.8	NM	NM	1.8	6.0	38
(E) OTHER SERVICES GROUP COMPOSITE	20390.1	19	38806.2	21	1466.1	125	2105.8	68	7.2	3.8	13.4	26
ABM INDUSTRIES (2)	398.3**	8	790.1	9	8.4	18	15.3	19	2.1	1.9	14.0	18
ACNIELSEN	380.7	10	734.7	9	20.9	30	26.9	50	5.5	4.6	13.6	27
CARMAX GROUP (10)	486.1	40	860.0	41	2.7	NM	-7.3	NM	0.6	NM	-5.1	NM
CASEY'S GENERAL STORES (8)	305.7*	12	598.8	9	6.2	31	15.1	25	2.0	1.7	13.3	20
CDI	407.6	5	796.7	4	12.4	32	24.1	20	3.0	2.4	19.1	14
CENDANT	1377.3**	8	2682.2	13	885.0	431	1066.4	194	64.3	13.1	21.3	21
CINTAS (7)	455.0	14	815.5	16	19.7	41	57.6	-9	4.3	8.3	17.1	53
CONVERGYS †	426.2	17	826.0	23	32.8	39	65.2	206	7.7	6.5	15.5	24
CRESTLINE CAPITAL	1091.7	4	2054.0	4	11.4	49	19.3	44	1.0	0.7	NA	34
GROUP 1 AUTOMOTIVE	625.4	45	1114.8	63	9.2	63	15.3	76	1.5	1.3	13.0	17
HANDLEMAN (8)	257.0	-6	547.1	-6	12.3	NM	17.9	NM	4.8	NM	-15.5	NM
IMS HEALTH †	332.7	23	645.9	26	46.2	NM	90.0	800	13.9	NM	31.3	41
INTERIM SERVICES	607.1	32	1173.1	34	18.8	39	34.7	44	3.1	2.9	9.8	15
KELLY SERVICES	1066.8	7	2092.7	7	20.7	1	35.9	1	1.9	2.1	15.7	14
LITHIA MOTORS	307.8	77	531.9	66	4.6	106	7.6	103	1.5	1.3	11.3	16
MANPOWER	2756.1	8	5318.5	10	31.8	21	52.4	9	1.2	1.0	12.3	21
MODIS PROFESSIONAL SERVICES	501.7	18	984.5	23	26.0	8	50.2	9	5.2	5.7	6.4	17
NORRELL (2)	361.5	3	716.1	4	5.2	-48	11.5	-36	1.4	2.8	12.6	NA
PANTRY (3)	456.7	79	816.5	72	5.2	136	5.2	720	1.1	0.9	18.7	NA
PAYCHEX (7)	304.9	14	611.7	13	37.9	35	74.1	36	12.4	10.5	31.9	56
PITTSBURGH BRINK'S GROUP	391.6	9	777.5	16	19.6	-5	36.4	-3	5.0	5.7	16.0	14
QUINTILES TRANSNATIONAL	456.4	34	869.7	33	35.2	72	43.8	5	7.7	6.0	10.4	34

RATE SCOREBOARD

	SALES				PROFITS				MARGINS				RANKING	
	2ND QUARTER 1999	CHANGE FROM 1998	6 MONTHS	CHANGE FROM 1998	2ND QUARTER 1999	CHANGE FROM 1998	6 MONTHS	CHANGE FROM 1998	2ND QUARTER 1999	CHANGE FROM 1998	6 MONTHS	CHANGE FROM 1998	2ND QUARTER 1999	CHANGE FROM 1998
	\$ MIL.	%	\$ MIL.	%	\$ MIL.	%	\$ MIL.	%	%	%	%	%	%	%
F INTERNATIONAL	497.1	12	982.0	16	33.9	7	69.2	13	6.8	7.3	24.5	17	1.40	
RP INTERNATIONAL	830.2	20	1734.3	25	76.0	-16	117.9	-41	9.2	13.2	7.1	14	1.18	
STER	1537.1	23	2652.1	19	18.0	-68	13.7	17	1.2	4.5	1.2	14	0.99	
AL MOTIVE	723.5	87	1317.0	103	10.1	116	16.8	147	1.4	1.2	22.1	14	0.99	
LE NG	664.3	14	1311.6	17	5.0	-19	10.6	-8	0.8	1.1	35.8	12	1.97	
TA	304.3	25	584.6	28	10.8	-2	17.2	-6	3.5	4.5	7.8	19	0.59	
/ O GROUP	1043.6	16	1948.3	21	8.6	7	12.3	19	0.8	0.9	4.4	18	0.45	
F TALS	503.7	98	896.0	111	25.9	27	42.1	56	5.1	8.0	4.5	56	0.55	
ATION SCIENCES (2)	532.3	29	1022.2	32	5.7	31	8.2	19	1.1	1.0	10.6	16	1.47	
TELECOMMUNICATIONS														
COMPOSITE	81443.1	22	158194.2	22	9003.1	76	16135.6	58	11.1	7.7	12.7	39	1.57	
MENT & SERVICES														
COMPOSITE	42887.1	42	82604.9	43	3402.3	NM	5201.5	NM	7.9	NM	5.6	65	0.93	
COMMUNICATIONS (2)	420.1	26	787.3	27	44.9	31	31.7	-47	10.7	10.3	12.1	50	0.87	
	15691.0	19	29787.0	14	1588.0	NM	2664.0	137	10.1	NM	9.6	22	2.41	
	416.8	7	831.0	9	53.5	-17	114.6	-6	12.8	16.5	13.9	27	1.57	
NOLOGIES (3)	9315.0	22	17535.0	27	750.0	NM	1192.0	NM	8.1	NM	33.2	63	1.07	
COM	8944.0	247	17945.0	266	879.0	287	1604.0	NM	9.8	8.8	-1.9	NM	-1.02	
COMMUNICATIONS	793.1	88	1456.9	95	-267.7	NM	-707.2	NM	NM	NM	NM	NM	-5.19	
COMMUNICATIONS INTERNATIONAL	873.7	122	1752.1	207	18.5	NM	23.3	NM	2.1	NM	-0.1	NM	-0.01	
GROUP	4244.0	8	8416.0	7	386.0	6	792.0	10	9.1	9.2	18.2	27	1.85	
GROUP	736.0	178	1340.0	186	-555.0	NM	-1160.0	NM	NM	NM	-40.3	NA	NA	
& DATA SYSTEMS	552.0	24	1057.5	26	182.5	NM	192.9	219	33.1	NM	8.3	25	3.16	
	540.4	39	1010.1	41	127.8	7	231.5	24	23.6	30.7	27.4	55	1.12	
AR ↑	361.0	24	686.9	28	194.9	494	222.7	37	54.0	11.3	13.6	18	3.16	
PHONE COMPANIES														
COMPOSITE	38556.0	6	75589.3	5	5600.8	-6	10934.1	10	14.5	16.3	29.0	26	2.29	
	1469.6	13	2838.0	14	190.1	-19	356.8	-11	12.9	17.9	13.1	42	1.71	
	4802.0	12	9232.0	10	819.0	-52	1740.0	-21	17.1	39.8	27.1	26	2.84	
IC	8295.0	5	16262.0	4	1173.0	14	2315.0	20	14.1	13.0	24.9	31	2.12	
	6148.0	9	12121.0	9	980.0	20	1595.0	-7	15.9	14.4	23.7	27	1.75	
SELL	253.6	16	495.8	14	28.3	76	53.0	37	11.2	7.3	54.5	31	0.69	
	646.8	0	1321.6	3	37.4	-22	77.3	-5	5.8	7.4	16.4	55	0.99	
	6288.0	0	12167.0	0	776.0	15	1688.0	107	12.3	10.7	33.4	22	3.46	
ICATIONS	7395.0	5	14712.0	6	1176.0	15	2291.0	14	15.9	14.5	32.7	26	2.20	
	3258.0	7	6440.0	6	421.0	9	818.0	5	12.9	12.6	146.8	18	3.09	
TRANSPORTATION														
COMPOSITE	50753.6	5	97662.7	5	3496.7	25	5112.3	15	6.9	5.8	14.1	16	2.22	
ES														
COMPOSITE	23194.3	4	44085.6	3	2136.8	26	2790.3	7	9.2	7.6	23.6	11	3.38	
GROUP	529.7	9	990.9	10	42.1	8	62.3	20	7.9	8.0	15.7	9	5.09	
EST HOLDINGS	569.5**	7	1089.1	7	42.3	2	68.2	2	7.4	7.8	15.9	8	2.70	
	5011.0	2	9494.0	-1	268.0	-34	362.0	-48	5.3	8.3	15.1	12	5.85	
	284.7	19	562.6	20	16.7	21	33.2	27	5.9	5.8	39.4	7	3.46	
L AIRLINES	2198.0	8	4254.0	9	137.0	-18	227.0	-8	6.2	8.2	26.4	9	4.88	
NES (6)	3957.0	5	7461.0	4	364.0	1	580.0	4	9.2	9.6	25.8	9	7.20	
AIRLINES	2597.0	5	4878.0	-1	120.0	145	91.0	-24	4.6	2.0	NM	NM	-3.67	
AIRLINES	1220.4	13	2296.0	14	157.8	18	253.6	25	12.9	12.4	19.3	23	0.91	
	4541.0	2	8702.0	2	672.0	138	750.0	119	14.8	6.3	32.2	6	10.36	
GROUP	2286.0	0	4358.0	0	317.0	63	363.0	24	13.9	8.4	184.5	5	7.38	
RAILROADS														
COMPOSITE	8777.0	5	17278.0	4	623.0	35	1175.0	32	7.1	5.5	7.3	26	1.50	
NORTHERN SANTA FE	2194.0	0	4384.0	1	238.0	-14	474.0	-13	10.8	12.6	13.7	14	2.29	
	2616.0	5	5157.0	4	114.0	-25	189.0	-22	4.4	6.1	8.2	22	2.28	
UTHERN ↑	1194.0**	11	2224.0	4	77.0	-59	189.0	-41	6.4	17.3	8.4	22	1.32	
IC	2773.0	6	5513.0	6	194.0	NM	323.0	NM	7.0	NM	-1.2	NM	-0.38	
PORTATION SERVICES														
COMPOSITE	13639.8	9	26376.3	9	579.3	13	883.6	20	4.2	4.1	14.5	17	2.10	
REIGHT	779.3	2	1548.7	2	27.0	-20	52.3	-21	3.5	4.4	15.5	10	2.49	
CAR	637.5	11	1204.4	11	27.3	22	42.5	43	4.3	3.9	12.9	13	2.27	
UP	791.7**	39	1471.0	37	16.2	241	-6.8	NM	2.0	0.8	1.9	NM	-0.36	
ORTATION	1361.6	14	2017.0	14	48.8	18	91.1	51	3.6	3.4	19.8	14	2.99	
FIFTY AUTOMOTIVE GROUP	259.4	14	470.9	13	17.0	84	22.4	123	6.6	4.1	15.6	11	2.06	
	4383.0	7	8482.0	5	221.0	29	299.0	63	5.0	4.2	14.3	21	2.10	
	345.9	7	663.5	5	1.2	75	-1.8	NM	0.3	1.5	5.1	30	0.37	
	455.2	3	886.4	4	38.1	24	77.3	13	8.4	7.0	12.6	14	2.80	
	1167.4	11	2200.3	13	87.9	17	136.7	24	4.4	7.3	14.4	14	2.75	
	319.4	13	627.1	17	2.6	27	4.6	24	0.8	0.7	8.0	19	1.76	

CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY 12 MONTHS ENDING 6-30	PRI. EARN. RAT.
	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1998 %		
PITTSBURY BAX GROUP	490.1**	13	950.8	14	3.1	208	3.5	NM	0.6	0.2	-2.5	NM
ROBINSON (C.H.) WORLDWIDE	579.4	6	1088.7	7	14.0	20	24.8	24	2.4	2.1	25.4	30
RYDER SYSTEM	1376.4	7	2697.0	7	30.2	-33	52.3	-37	2.2	3.5	11.8	13
TRINITY INDUSTRIES (9)	693.4	-3	1468.5	3	45.0	-22	85.9	-11	6.5	8.1	17.9	8
(D) TRUCKING & SHIPPING												
GROUP COMPOSITE	5142.5	6	9922.8	5	157.6	14	263.4	17	3.1	2.9	12.6	16
ALEXANDER & BALDWIN	263.8**	-28	461.3	-30	23.2	23	39.1	19	8.8	5.2	5.5	28
ALLIED HOLDINGS	287.0	2	548.2	3	4.1	-46	0.1	-98	1.4	2.7	0.4	NM
AMERICAN FREIGHTWAYS	291.2	18	556.6	17	13.1	71	19.9	84	4.5	3.1	13.9	18
ARKANSAS BEST	418.9	3	813.3	4	11.1	44	18.6	62	2.6	1.9	17.8	7
CONSOLIDATED FREIGHTWAYS	589.8	7	1148.0	5	2.5	-66	9.3	-36	0.4	1.4	7.7	12
HUNT (J.B.) TRANSPORT SERVICES	497.6	8	967.8	11	10.8	-31	21.4	-15	2.2	3.4	11.2	13
LANDSTAR SYSTEM	345.1	5	656.5	5	10.8	20	18.2	31	3.1	2.7	34.9	11
ROADWAY EXPRESS	621.1	2	1226.4	0	7.6	44	15.6	31	1.2	0.9	11.6	14
SWIFT TRANSPORTATION	262.5	22	497.5	22	17.5	25	29.6	26	6.7	6.5	18.1	23
USFREIGHTWAYS	548.9	23	1062.1	19	26.3	46	43.8	38	4.8	4.0	17.5	14
WERNER ENTERPRISES	260.6	23	501.6	22	17.6	17	30.2	17	6.7	7.1	13.1	15
YELLOW	756.1	4	1483.6	4	13.0	6	17.7	11	1.7	1.7	11.4	10
24 UTILITIES												
INDUSTRY COMPOSITE	61279.6	6	124313.1	5	3812.8	27	8223.9	13	6.2	5.2	10.1	19
(A) ELECTRIC, WATER & COGENERATION												
GROUP COMPOSITE	51419.2	4	103031.5	4	3631.0	20	7510.7	13	7.1	6.1	10.7	17
AES †	640.0	13	1278.0	12	71.0	0	58.0	-57	11.1	12.6	21.9	46
ALLEGHENY ENERGY	643.4	3	1333.4	5	66.8	19	166.8	22	10.4	9.0	14.3	14
ALLIANT ENERGY	486.1	-1	1033.0	-1	40.2	NM	83.6	262	8.3	NM	9.8	15
AMEREN	859.9	5	1595.8	5	89.7	3	147.2	13	10.4	10.6	13.4	13
AVISTA	1411.7	123	2647.9	120	8.5	-46	27.9	-42	0.6	2.5	8.2	20
BEC ENERGY	379.3	-2	751.2	-4	36.3	6	55.8	-2	9.6	8.9	13.0	15
CAROLINA POWER & LIGHT	762.8	2	1525.7	1	63.2	-4	155.4	2	8.3	8.7	13.4	15
CENTRAL & SOUTH WEST	1319.0	-2	2544.0	-2	105.0	-4	152.0	-11	8.0	8.1	12.0	11
CINERGY	1275.4	9	2677.7	6	60.4	NM	189.0	125	4.7	NM	14.2	14
CMS ENERGY	1353.0	20	2891.0	15	80.0	14	183.0	52	5.9	6.2	13.3	15
CONNECTICUT	802.5	17	1749.1	47	36.3	-18	90.0	106	4.5	6.5	10.7	13
CONSOLIDATED EDISON	1479.1	-5	3255.7	-5	69.8	5	249.8	3	4.7	4.3	12.3	14
CONSTELLATION ENERGY GROUP	820.0	7	1752.3	7	71.4	13	157.6	10	8.7	8.2	10.8	14
DOMINION RESOURCES	1315.3	-17	2608.3	-22	117.4	NM	1.1	-98	8.9	NM	10.5	12
DPL	290.3	-6	673.8	-2	37.6	6	110.3	4	13.0	11.5	13.9	15
DQE	326.8	8	652.9	8	42.0	4	90.5	6	12.9	13.2	13.8	16
DTE ENERGY	1150.0	8	2174.0	8	110.0	7	225.0	7	9.6	9.7	12.4	13
DUKE ENERGY	4691.0	17	8851.0	9	288.0	3	595.0	-2	6.1	7.0	13.7	17
EDISON INTERNATIONAL	2116.0	9	4203.7	9	137.9	-11	290.5	-6	6.5	8.0	13.0	14
ENERGY EAST	507.9	-7	1162.4	-2	56.5	79	144.6	31	11.1	5.8	14.8	14
ENTERGY	2316.4	-8	3956.3	-18	209.8	-3	282.7	2	9.1	8.6	10.5	10
FIRSTENERGY	1523.9	4	2941.3	4	144.7	85	300.8	42	9.5	5.4	11.7	13
FLORIDA PROGRESS	976.3	8	1796.7	6	77.0	-2	145.0	12	7.9	8.7	15.7	14
FPL GROUP	1614.0	-5	3026.0	0	81.0	-55	294.0	1	5.0	10.6	12.8	14
GPU	897.7	12	1971.5	-4	109.2	32	275.8	29	12.2	8.2	13.0	11
HAWAIIAN ELECTRIC INDUSTRIES	369.7	3	721.9	-2	23.3	-5	44.6	-8	6.3	6.8	11.1	12
ILLINOIS	479.3	-12	1027.7	-8	13.2	NM	35.1	NM	2.8	NM	NM	NM
MONTANA POWER	309.7	20	631.5	14	25.2	12	59.1	1	8.2	8.7	14.8	23
NEW ENGLAND ELECTRIC SYSTEM	595.3	4	1252.8	5	27.8	-20	72.3	-22	4.7	6.1	10.8	18
NIAGARA MOHAWK HOLDINGS	914.3	-3	2033.5	-4	-16.3	NM	43.6	NM	NM	NM	0.2	NM
NISOURCE	680.7	4	1572.2	10	25.1	-21	103.7	10	3.7	4.8	14.8	16
NORTHEAST UTILITIES	1038.6	19	2082.0	14	6.2	-53	30.6	NM	0.6	1.5	-5.6	NM
ORFICORP	943.7	-22	1903.5	-23	55.0	-30	146.3	128	5.8	6.6	4.4	33
PACIFIC ENERGY	1194.4	-2	2450.8	2	87.6	-44	237.3	-13	7.3	13.0	19.8	19
PGE	4820.0	1	10077.0	10	180.0	3	336.0	7	3.7	3.6	9.7	17
PINNACLE WEST CAPITAL	544.1	16	982.6	11	68.7	34	100.4	18	12.6	10.9	12.1	13
POTOMAC ELECTRIC POWER	544.6	3	973.6	7	75.3	14	101.3	38	13.8	12.5	13.3	15
PP&L RESOURCES	1004.0	20	2071.0	20	70.0	15	196.0	17	7.0	7.3	21.8	12
PUBLIC SERVICE CO. OF NEW MEXICO	261.4	13	534.2	4	18.2	10	41.3	-2	7.0	7.2	10.8	9
PUBLIC SERVICE ENTERPRISE GROUP	1436.0	5	3231.0	7	184.0	48	375.0	18	12.8	9.1	14.6	13
PUGET SOUND ENERGY	435.4	18	1010.8	13	31.1	59	100.8	18	7.1	5.3	12.5	12
RGS ENERGY GROUP	275.8	31	601.9	22	14.8	-5	52.1	-3	5.4	7.4	11.1	11
SCANA	375.0	-3	772.0	-3	26.0	-41	65.0	-41	6.9	11.3	10.1	14
SOUTHERN	2791.0	-4	5233.0	-3	319.6	15	549.3	5	11.5	9.5	10.3	19
TECO ENERGY	491.7	0	938.1	-2	52.0	-10	100.6	13	10.6	11.8	14.0	13
UNICOM	1686.0	-5	3223.8	-6	134.3	41	246.7	51	8.0	5.3	11.7	15
YORK RESEARCH (10)	270.6	59	654.1	94	0.3	-74	2.2	-62	0.1	0.7	6.6	20

BY	SALES				PROFITS				MARGINS				PER MONTHLY	
	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 \$ MIL	CHANGE FROM 1998 %	6 MONTHS 1999 \$ MIL	CHANGE FROM 1998 %	2ND QUARTER 1999 %	2ND QUARTER 1999 %	6 MONTHS 1999 %	6 MONTHS 1999 %	6 MONTHS 1999 %	6 MONTHS 1999 %
OIL & TRANSMISSION														
COMPOSITE	9860.4	17	21281.5	8	181.9	NM	713.2	7	1.8	NM	5.5	49	0.78	
ENERGY GROUP	1691.2	28	4239.4	34	26.1	14	176.5	4	1.5	1.7	13.1	19	3.39	
ED NATURAL GAS	566.4	7	1612.9	5	-80.0	NM	59.0	NM	NM	8.8	6.5	37	1.68	
ENERGY	1768.0	36	3262.0	12	11.0	-82	88.0	30	11.6	4.7	8.9	23	1.56	
RESOURCES GROUP	290.2	61	549.2	57	17.8	NM	30.5	154	6.1	NM	9.3	25	0.97	
NATURAL GAS (3)	248.7	2	732.1	5	11.8	-38	73.0	NM	4.8	7.9	11.4	17	2.76	
	271.8	0	848.2	2	26.5	-7	65.5	1	9.8	10.5	15.0	16	2.45	
	418.1	-6	1005.8	-13	21.2	21	89.7	11	5.1	6.1	4.6	27	1.22	
ENERGY	1511.0	24	2680.0	5	85.0	158	187.0	51	5.6	2.7	12.2	15	1.50	
	849.4	-8	1623.2	-20	33.6	NM	-178.6	NM	4.0	NM	-38.6	NM	-3.83	
	259.3	2	758.5	2	11.8	NM	49.7	75	4.6	NM	14.4	13	1.69	
	1986.3	12	3970.3	6	17.0	-72	72.9	45	0.9	3.4	1.9	NM	0.18	

ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard category under which it is listed

A Airnet International 5 AnnTaylor Stores 8 Apache 11a Apple Computer 18b Applied Materials 15c Applied Power 18a Arch Chemicals 4 Arch Coal 11a Archer Daniels 10b Arkansas Best 23d Armco 16b Armstrong World 6b Arrow Electronics 21b Arvin Industries 2b Asarco 16c Ashland 11a Associates First Capital 17a Astoria Financial 17c AT&T 22a Atlantic Richfield 11a Atmel 9d Autoliv 2b AutoZone 8 Avery Dennison 7b Avis Rent A Car 23c Avista 24a Avon Products 6d AVX 9d B Ball 7a BancWest 3d Bandag 2c Bank of America 3c Bank of New York 3a Bank One 3b Bank United 17c BankBoston 3a Banta 21d Bard (C.R.) 12d Barnes & Noble 8 Bausch & Lomb 12d Baxter International 12d BB&T 3c Bear Stearns 17a Beazer Homes USA 13b BEC Energy 24a Beckman Coulter 9c Becton, Dickinson 12d Bed Bath & Beyond 6b Bell Atlantic 22b BellSouth 22b Belo (A.H.) 20b Bemis 7b Bergen Brunswig 12a Best Buy 6b Bestfoods 10b Bethlehem Steel 16b Big Flower Press 21d Bindley Western Inds 12a	C BJ Services 11b BJ's Wholesale Club 8 Black & Decker 15b Block (H&R) 17a Boeing 1 Boise Cascade 19b Borders Group 8 Borg-Warner Automotive 2b Boston Scientific 12d Bowater 19b Bradlees 8 Bristol-Myers Squibb 12b Brown Shoe 6a Brown-Forman 6c Browning-Ferris 21c Bruno's 10c Brunswick 14d Budget Group 23c Building Materials 8 Burlington Coat Factory 8 Burlington Industries 15d Burlington Northern Santa Fe 23b Burlington Resources 11a Butler Mfg. 15a D Cabletron Systems 18c Cabot 4 Cadence Design Systems 18c Cameron Ashley 21b Campbell Soup 10b Canandaigua Brands 6c Capital One Financial 17a Cardinal Health 12a Carlisle 15a CarMax Group 21e Carnival 14d Carolina Power 24a Carpenter Tech. 16b Case 15c Casey's General Stores 21e Caterpillar 15c CBRT Group 14a CDI 21e CDW Computer Centers 8 CellStar 21b Cendant 21e Centex 13b Central & South West 24a CenturyTel 22a Cendian 18c Champion Enterprises 13b Champion Intl. 19b Charming Shoppes 8 Charter One Financial 17c Chase Manhattan 3a Chesapeake 10b Chevron 11a Chicago Title 17a Chiquita Brands Intl. 10b	Cincinnati Bell 22b Cincinnati Financial 17b CINergy 24a Cintas 21e Circuit City Group 6b Cisco Systems 18c Citygroup 17a CKE Restaurants 14a Clear Channel Communs. 20a CMS Energy 24a CNF Transportation 23c Coastal 11a Coca-Cola 6c Coca-Cola Bottling 6c Coca-Cola Enterprises 6c Cole National 8 Colgate-Palmolive 6d Collins & Aikman 15d Columbia Energy Group 24b Columbia/HCA Healthcare 12c Comdisco 18c Comerica 3b Commerce Group 17b Commercial Metals 16b Commonwealth Inds. 16c Compaq Computer 18b CompuCom Systems 18a Computer Associates 18c Computer Sciences 18c Compuware 18c ConAgra 10b Connectiv 24a Conexant Systems 9d Conoco 11a Conseco 17b Consol Energy 11a Consolidated Edison 24a Cons. Freightways 23d Cons. Natural Gas 24b Consolidated Papers 19b Consolidated Stores 8 Constellation Energy 24a Continental Airlines 23a Convergys 21e Cooper Cameron 11b Cooper Industries 9a Cooper Tire & Rubber 2c Coors (Adolph) 6c Cordant Technologies 1 Corn Products Intl. 10b Corning 15a Corporate Express 8 Costco 8 Countrywide Credit 17a Cox Communications 20a Crane 15a Crestline Capital 21e Crown Central Petroleum 11a Crown Cork & Seal 7a CSK Auto 8 CSX 23b	Cummins Engine 15c CVS 12a Cyprus Amax Minerals 16c Cytec Industries 4 D Dain Rauscher 17a Dana 2b Danaher 15a Darden Restaurants 14a Data General 18b Dayton Hudson 8 Dean Foods 10b Deere 15c Delco Remy International 15a Dell Computer 18b Delphi Automotive 2b Delta Air Lines 23a Deluxe 18a Detroit Diesel 2b Dexter 15d Dial 6d Diebold 18a DII Group 9d Dillard's 8 Dime Bancorp 17c Disney (Walt) 14b Dole Food 10b Dollar General 8 Dollar Thrifty Automotive 23c Dollar Tree Stores 8 Domination Resources 24a Donaldson, Lufkin & Jenrette 17a Donnelley (R.R.) 21d Dover 15c Dow Chemical 4 Dow Jones 20b DPL 24a DQE 24a Dreyer's Grand Ice Cream 10b DST Systems 18c DTE Energy 24a Duke Energy 24a Dun & Bradstreet 17a DuPont 4 Dura Automotive Systems 2b Dynegy 21b	EMC 18b Energy East 24a Engelhard 16c Enron 21b Energy 24a Equifax 17a Everest Reinsurance 17b Express Scripts 12c Exxon 11a F Family Dollar Stores 8 Fannie Mae 17a FDX 23c Federal Signal 15a Federal-Mogul 2b Federated Dept. Stores 8 Ferro 4 Fidelity National Finl. 17a Fifth Third Bancorp 3b Finova Group 17a First American 3c First American Finl. 17a First Data 18c First Security 3d First Tennessee Natl. 3c First Union 3c Firststar 3b FirstEnergy 24a Flserv 18c Fleet Financial Group 3a Fleetwood Ents. 13b Fleming 10a Florida Progress 24a Flowserv 15a Fluor 21a FMC 15c Food Lion 10c Foodmaker 14a Ford Motor 2a Fort James 19b Fortune Brands 15a Foster Wheeler 21a FPL Group 24a Franklin Resources 17a Freddie Mac 17a Freeport-McMoRan C&G 16c Frit 23c Frontier 22b Fruit of the Loom 6a Fuller (H.B.) 14 Furniture Brands 6b	GATX 23c GenCorp 2b Genentech 12b General Cable 16c General Dynamics 1 General Electric 5 General Instrument 9b General Mills 10b General Motors 2a General Nutrition 10c Genuine Parts 21b Geon 4 Georgia-Pacific Group 19a Gillette 6d Golden State Bancorp 17c Golden West 17c Goldman Sachs Group 17a Goodrich (B.F.) 1 Goody's Family Clothing 8 Goodyear Tire & Rubber 2c GPU 24a Grace (W.R.) 4 Grainger (W.W.) 21b Great A&P 10c Great Lakes Chemical 4 GreenPoint Financial 17c Group 1 Automotive 21e GTE 22b Guidant 12d Gulfstream Aerospace 1 H Hadco 9d Halliburton 11b Handleman 21e Hanna (M.A.) 4 Hannaford Brothers 10c Harcourt General 5 Harley-Davidson 14d Harnischfeger 15c Harrah's Entertainment 14b Harris 9b Harsco 15a Hartford Financial Services 17b Hartford Life 17b Hasbro 14d Hawaiian Electric 24a Hayes Lemmerz Intl. 2b Health Management Assoc. 12c Heilig-Meyers 6b Heinz (H.J.) 10b Heller Financial 17a Hershey Foods 10b Hess 23c Hewlett-Packard 18b Hexcel 15a Hibernia 3c Hillenbrand 15a Holco 14c Home Depot 8
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ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard category under which it is listed

HomeBase 8
HON Industries 18a
Honeywell 9c
Hormel Foods 10b
Horton (D.R.) 13b
Host Marriott 13b
Host Marriott Services 14a
Household Intl. 17a
Hommet International 1
Hub Group 23c
Hubbell 9a
Hughes Electronics 9b
Hughes Supply 21b
Humana 12c
Hunt (J.B.) 23d
Huntington Bancshares 3b

I
IBM 18b
IBP 10b
IKON Office Solutions 5
Illinois Tool Works 15c
Illinova 24a
Imation 14d
IMC Global 4
IMS Health 21e
InaCom 18c
Infinity Broadcasting 20a
Ingersoll-Rand 15c
Ingles Markets 10c
Ingram Micro 18c
Insight Enterprises 8
Integrated Health Svcs. 12c
Intel 9d
Interface 15d
Interim Services 21e
International Flavors 4
International Game Tech. 15a

Intl. Home Foods 10b
Intl. Multifoods 10a
International Paper 19b
Interpublic Group 21d
Interstate Bakeries 10b
Intimate Brands 8
Iomega 18b
IT Group 21c
ITT Industries 15c

J
Jabil Circuit 9d
Jacobs Engineering 21a
Jo-Ann Stores 8
Johns Manville 13a
Johnson & Johnson 12d
Johnson Controls 15a
Jostens 15a

K
Kaiser Aluminum 16c
Kaufman & Broad 13b
Keane 18c
Kellogg 10b
Kellwood 6a
Kelly Services 21e
Kennametal 15b
KeyCorp 3b
Kimberly-Clark 19b
Kmart 8
Knight-Ridder 20b
Knoll 18a
Kohl's 8

L
L-3 Communications 9b
La-Z-Boy 6b

Laboratory Corp. of America 12c
Lafarge 13a
LandAmerica Financial 17a
Lands' End 8
Landstar System 23d
Lear 2b
Legg Mason 17a
Leggett & Platt 6b
Lehman Brothers Holdings 17a
Lennar 13b
Lexmark International 18b
Liberty Financial 17b
Lilly (Eli) 12b
Limited 8
Lincoln Electric 15b
Lincoln National 17b
Linens 'N Things 6b
Lithia Motors 21e
Litton Industries 9b
Liz Claiborne 6a
Lockheed Martin 1
Longs Drug Stores 12a
Louisiana-Pacific 19a
Lowe's 8
LSI Logic 9d
LTV 16b
Lubrizol 4
Lucent Technologies 22a
Lyondell Chemical 4

M
M.D.C. Holdings 13b
Mail-Well 7b
Mandalay Resort 14b
Manpower 21e
Mark IV Industries 2b
Marriott Intl. 14c
Marsh & McLennan 17a

Marsh Supermarkets 10c
Marshall Industries 21b
Martin Marietta Materials 13a
Mattel 14d
Maxtor 18b
Maxxam 16a
May Department Stores 8
Maytag 6b
MBNA 3a
McClatchy 20b
McCormick 10b
McDonald's 14a
McGraw-Hill 20b
MCI WorldCom 22a
MDU Resources Group 24b
Mead 19b
MediaOne Group 20a
Medtronic 12d
Mellon Bank 3a
Mercantile Bancorp. 3b
Merck 12b
Merisel 18a
MeriStar Hotels & Resorts 14c
Meritor Automotive 2b
Merrill Lynch 17a
Metals USA 21b
Mettler-Toledo Intl. 15c
MGIC Investment 17b
MGM Grand 14b
Michael Foods 10b
Michaels Stores 8
Micro Warehouse 8
MicroAge 18a
Micron Electronics 18b
Micron Technology 9d
Microsoft 18c
Milacron 15c
Millennium Chemicals 4
Miller (Herman) 18a

Minnesota Mining 15a
Mobil 11a
Modine Mfg. 2b
Modis Professional Svcs. 21e
Mohawk Industries 15d
Molex 9d
Monsanto 4
Montana Power 24a
Morgan (J.P.) 3a
Morgan Stanley Dean Witter 17a
Morrison Knudsen 21a
Motorola 9b
Mueller Industries 16c
Murphy Oil 11a
Musciand Stores 14d

N
Nabisco Group 10b
Nabisco Holdings 10b
Nacco Industries 15b
Nash Finch 10a
National City 3b
National Fuel Gas 24b
National Semicond. 9d
National Service 9a
National Steel 16b
Navistar International 2a
NCR 18a
Neiman Marcus Group 8
New England Electric 24a
New York Times 20b
Newell Rubbermaid 15a
Newmont Mining 16c
Newport News Shipbuilding 1
Nextel Communications 22a
Niagara Mohawk 24a
Nicor 24b
Nike 6a

NiSource 24a
Nordstrom 8
Norfolk Southern 23b
Norrell 21e
Nortek 13a
Northeast Utilities 24a
Northern Trust 3b
Northrop Grumman 1
Northwest Airlines 23a
Novell 18c
Nucor 16b
NVR 13b

O
Oakwood Homes 13b
Occidental Pet. 11a
Office Depot 8
OfficeMax 8
Old Kent Financial 3b
Omnicom Group 21d
Oneok 24b
Oracle 18c
Oshkosh Truck 2a
Outback Steakhouse 14a
Owens & Minor 12d
Owens Corning 13a
Owens-Illinois 7a
Oxford Health Plans 12c

P
Paccar 2a
Pacific Century Finl. 3d
PacifiCare Health 12c
PacifiCorp 24a
PaineWebber Group 17a
Pall 5
Pantry 21e
Parametric Technology 18c

Park Place Enter.
Parker Hannifin
Paychex 21e
Payless Cashway
Payless ShoeSource
PECO Energy 24a
Penn Traffic 10c
Penney (J.C.) 8
Pentair 15c
Peoples Heritage
PeopleSoft 18c
Pep Boys 8
Pepsi Bottling Gr.
PepsiCo 8
Petsmart 8
Pfizer 12b
PG&E 24a
Pharmacia & Up.
Phelps Dodge 16
Philip Morris 6a
Phillips Petroleum
Phillips-Van Heu.
PhyCor 12c
Pier 1 Imports 6b
Pilgrim's Pride 11
Pinnacle West 24a
Pioneer Hi-Bred
Pioneer-Standard
Pitney Bowes 18
Pittston BAX Gro.
Pittston Brink's C.
Pittway 5
PNC Bank 3a
Polaris Industries
Polaroid 14d
Popular 3c
Pottlatch 19b
Potomac Electric
PP&L Resources



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The number following each company name identifies the Scoreboard category under which it is listed

13a	RGS Energy Group 24a	Service Corp. Intl. 21e	Standard Products 2b	Texaco 11a	Unit 15d	Wachovia 3c
13b	Richfood Holdings 10a	ServiceMaster 21e	Standard Register 18a	Texas Industries 16b	Union Pacific 23b	Waco 8
13c	Rite Aid 12a	Seven 10c	Stanley Works 15b	Texas Instruments 9d	Union Pacific 23b	Waco 12a
13d	Roadway Express 23d	Shared Medical 18c	Staples 8	Textron 5	Union Pacific 23b	Waco 18a
13e	Robert Half International 21e	Shaw Industries 15d	Starbucks 10b	Thomas & Betts 9d	Union Pacific 23b	Waco 16b
13f	Robinson (C.H.) 23c	Sherwin-Williams 13a	State Street 3a	3Com 18c	Union Pacific 23b	Waco 12b
13g	Rock-Tenn 7b	ShopKo Stores 8	Steelcase 18a	3M 15a	Union Pacific 23b	Waco 17c
13h	Rockwell International 9a	Sigma-Aldrich 12b	Stewart Information Svcs. 17a	Tiffany 8	Union Pacific 23b	Waco 20b
13i	Rohm & Haas 4	Silgan Holdings 7a	Stone & Webster 21a	Time Warner 20b	Union Pacific 23b	Waco 13a
13j	Ross Stores 8	Silicon Graphics 18b	Stryker 12d	Times Mirror 20b	Union Pacific 23b	Waco 11b
13k	Royal Caribbean Cruises 14d	SLM Holding 17a	Summit Bancorp. 3a	Timken 15c	Union Pacific 23b	Waco 13b
13l	Ruddick 10c	Smart & Final 10c	Sun Microsystems 18b	TJX 8	Union Pacific 23b	Waco 10c
13m	Russell 6a	SMART Modular Tech. 9d	SunGard Data Systems 18c	Toll Brothers 13b	Union Pacific 23b	Waco 12c
13n	Ryder System 23c	Smith (A.O.) 9a	Sunoco 11a	Toro 15c	Union Pacific 23b	Waco 3b
13o	Ryerson Tull 16b	Smith International 11b	SunTrust Banks 3c	Tosco 11a	Union Pacific 23b	Waco 14a
13p	Ryland Group 13b	Smithfield Foods 10b	Supervalu 10a	Tower Automotive 15a	Union Pacific 23b	Waco 23d
13q		Smurfit-Stone Container 7b	Swift Transportation 23d	Toys 'R' Us 8	Union Pacific 23b	Waco 18b
13r		Snap-on 15b	Sybron International 12d	Transatlantic Holdings 17b	Union Pacific 23b	Waco 15d
13s		Sodexho Marriott 14a	Symbol Technologies 18b	Travelers Property Casualty 17b	Union Pacific 23b	Waco 19b
13t		Soletron 9d	Synovus Financial 3c	Tribune 20b	Union Pacific 23b	Waco 19b
13u		Sonata 24b	Systemax 8	Tricon Global Restaurants 14a	Union Pacific 23b	Waco 6b
13v		Sonic Automotive 21e		Trinity Industries 23c	Union Pacific 23b	Waco 8
13w		Sonoco Products 7b		TRW 5	Union Pacific 23b	Waco 18b
13x		Southdown 13a		Tupperware 15a	Union Pacific 23b	Waco 6b
13y		Saks 8		Turner 21a	Union Pacific 23b	Waco 21d
13z		Sanmina 9d		TV Guide 20a	Union Pacific 23b	Waco 16b
14a		SBC Communications 22b		Tyco Intl. 15c	Union Pacific 23b	Waco 10b
14b		Scana 24a			Union Pacific 23b	
14c		Schering-Plough 12b			Union Pacific 23b	
14d		Schlumberger 11b			Union Pacific 23b	
14e		Scholastic 20b			Union Pacific 23b	
14f		Schulman (A.) 4			Union Pacific 23b	
14g		Schwab (Charles) 17a			Union Pacific 23b	
14h		Scotts 4			Union Pacific 23b	
14i		Scripps (E.W.) 20b			Union Pacific 23b	
14j		Seagate Technology 18b			Union Pacific 23b	
14k		Sealed Air 7b			Union Pacific 23b	
14l		Sears, Roebuck 8			Union Pacific 23b	
14m		Sempra Energy 24b			Union Pacific 23b	
14n					Union Pacific 23b	
14o					Union Pacific 23b	
14p					Union Pacific 23b	
14q					Union Pacific 23b	
14r					Union Pacific 23b	
14s					Union Pacific 23b	
14t					Union Pacific 23b	
14u					Union Pacific 23b	
14v					Union Pacific 23b	
14w					Union Pacific 23b	
14x					Union Pacific 23b	
14y					Union Pacific 23b	
14z					Union Pacific 23b	

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www.compaq.com.sg/storageworks/

Discovery Channel
www.discovery.com

Ernst & Young
www.ey.com

Firstsource.com
www.firstsource.com

Flashcom
www.flashcom.com

General Motors
www.gm.com

GTE Internetworking
www.internetworking.gte.com

Hewlett-Packard
www.hp.com

Homewood Suites
www.homewood_suites.com

HP ECSO
www.sure-e.com

HSBC Group
www.hsbc.com

IBM
www.ibm.com

Infinium Software
www.infinium.com

Iomega
www.iomega.com

**Iowa Department of
Economic Development**
www.smart.state.ia.us

J.D. Edwards & Company
www.jdedwards.com

KOMATSU LTD
www.komatsu.com

Lexus
www.lexus.com

Lincoln
www.lincolnvehicles.com

Mercury Interactive
www.merc-int.com

Microsoft
www.microsoft.com

Mindspring
www.mindspring.net

National Discount Brokers
www.ndb.com

Nissan Motor Corporation
www.nissandriven.com

**Nokia Mobile Phones
(SEA) Pte Ltd**
www.nokia-asia.com

OnSale
www.onsale.com

Opel
www.opel.com

Quantum
www.quantum.com

Schott
www.schottglass.com

Sony Electronics
www.sony.com/display

Sprint
www.sprint.com

Swissair Qualifyer
www.qualifyergroup.com

T. Rowe Price
www.troweprice.com

Teligent, Inc.
www.teligent.com

**Toshiba America
Information Systems**
www.toshiba.com

Tyco International
www.tyco.com

**United Parcel Service
(UPS)**
www.ups.com

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'Mom, My Back Really Hurts'

Computer use and heavy backpacks are taking a toll on kids

BY MARY C. HICKEY

At age 15, Elizabeth Nemrava, of Winnetka, Ill., suffers from shoulder and back pain so severe that she winces when she bends over or abruptly twists around. Her mother, Pat, is convinced the problem stems from the heavy backpack that her daughter, now a high school sophomore, has been hauling around since middle school. "Elizabeth weighs 110 pounds, and her backpack weighs 38," her mother says. "That has to be straining her muscles and bones."

Just as adults face occupational hazards, the work of today's school kids also carries risks. Medical professionals report an increase in complaints about back, neck, and shoulder pain linked to two factors: backpacks overloaded with books and improperly designed computer workstations where kids spend hours on end. It used to be that "if children had back pain, it meant they had a serious medical condition," such as a tumor, says Dr. John Sarwark, interim chief of the pe-

diatric orthopedic surgery department at Children's Memorial Hospital in Chicago. "Now we're seeing more and more kids with the kind of mechanical back pain much more typical of a middle-aged adult."

The effect of ergonomic factors on children's musculoskeletal health remains undocumented. But physicians, chiropractors, and physical therapists say that the potential dangers range from discomfort, pain, and muscle strain in the short term to chronic conditions. Already, back pain is the most common ailment of working Americans, costing the U.S. economy \$50 billion annually in lost wages and productivity. "If we don't start paying attention to these issues in children, we may be creating a generation of adults with even greater back and neck problems than we're seeing today," says Dr. Jerome McAndrews, spokesman for the American Chiropractic Assn., one of several professional groups focusing attention on the issue (table).

Take the ubiquitous backpack. With many

Your Kids



schools limiting the use of lockers for security purposes, students lug around their books (and weighty laptops) throughout the day. "We see kids carrying packs that weigh 30, 40, even 50 pounds," says Betty Strauss, a certified school nurse in Montclair, N.J.

Such excessive weight forces a child to lean forward, which flattens the

natural curve in the lower back. This promotes poor posture and can cause back and neck pain, says Jan Richardson, president of the American Physical Therapy Assn. And if kids sling their packs over one shoulder, as they're prone to do, they can strain shoulder and neck muscles and cause a temporary curvature of the spine. Straps that aren't adjusted properly can damage nerves around the collarbone.

HUNCHED. Health experts are less certain about the impact of ergonomically incorrect computer stations. But given an Education Dept. push to put Net-ready computers in every classroom by 2000, concern is mounting. In one of the first studies of its kind, researchers at Cornell University in Ithaca, N. Y., observed third-, fourth-, and fifth-graders at 11 schools and found a "striking misfit" between the size of the children and their gear. With monitors and keyboards often set too high, more than a third of the kids sat in ways that resulted in craned necks, hunched shoulders, awkwardly placed wrists, and other unhealthy postures, says Alan Hedge, a professor of ergonomics at Cornell.

What's more, at home children tend to work on computer setups designed for their parents. In adults, the risk of back, neck, and shoulder pain, as well as repetitive stress injuries to the hands and wrists, increases with each hour spent in front of a monitor. It's not known whether children, who have more flexible bones and joints, suffer similar effects. But "there's no reason to believe that they don't," Hedge says. Medical experts say that parents can lower their children's risk of problems with simple

preventive steps. When using backpacks should never carry more than 15% of the weight, according to guidelines issued by the American Occupational Therapy Assn. Padded shoulder straps are best, and the pack should fit snugly so the weight of the pack is distributed and supported by back and arm muscles.

For kids who already have back pain, more drastic measures may be needed.

Frederick Neustadt, chief of pediatric surgery at All Children's Hospital in St. Petersburg, says he sees two or three children a week with pain severe that he recommends their school issue a set of books. That way, the child has to go to and from school with a heavy load. Doctors prescribe a backpack with wheels, such as the one by RollerBags. The company was founded by Ricky Hussain, an immigrant and father of four who was complaining of back

comfort. **PARALLEL ARMS.** When a PC, kids should sit with their lower backs supported, eyes level with the top of the screen. "They should not crane their neck," says Karen Jacobs, an occupational therapist and ergonomics teaches "healthy cor-

posture" classes at public schools in Andover, Mass. The chair should be positioned parallel to or just slightly above the keypad and mouse. If equipment can't be adjusted, Jacobs suggests a stack of books under the chair to raise a child's body to the right height and a box to serve as a foot rest. "Let a child sit in front of a screen for 15 minutes or so and move around or stretch," she adds. "They should get up every 15 minutes or so and move around or stretch."

A few companies make ergonomic furniture. Kin-der-Link in New York (800-888-8888, www.kinderlink.com) offers adjustable desks for \$875 and up. MediaFocus in Naples, Fla. (888-232-3686, diafocus.com/furniture/kids_ch.html), sells European-made children's furniture, with prices starting at \$279.

Regular exercise is a good way to keep muscles strong, says Dr. Sarwark. He describes a simple exercise for kids with heavy backpacks or who sit for long periods at the computer: Have the child lie flat on the floor and give the back an "easy, passive stretch." He cautions that a physician should always be consulted for severe and persistent back pain.)

For generations, parents have been urging children to stand and sit up straight. Given the occupational hazards of growing up today, the admonitions are more important than ever.

Keeping Young Backs Healthy

If your kids lug around heavy backpacks or spend hours hunched over a computer keyboard, make sure they periodically...

- Lie flat on the floor, face up, for a passive stretch
- Stand with feet slightly apart, raise both arms above the head, and reach upward
- Shrug the shoulders toward the ears, count to ten, release, and repeat several times
- Extend the arms in front with palms facing outward, stretch, and hold for a count of ten

Kids' Ergonomics

NAME/PHONE

AMERICAN CHIROPRACTIC ASSN.
800 986-4636
www.amerchiro.org

AMERICAN OCCUPATIONAL THERAPY ASSN.
301 652-AOTA
www.aota.org

AMERICAN PHYSICAL THERAPY ASSN.
703 684-2782
www.apta.org

ROLLERBAGS
888 889-6388

DESCRIPTION

Offers pamphlets on how kids can maintain a healthy back and spine

Lets you download a screen saver illustrating ergonomically correct posture

Lists physical therapists in different areas

Sells book bags on wheels

elding Children m Cyber Perils

Vise points parents toward online safeguards

RD C.

Online pedophiles. Pornographic Web sites. Unscrupulous marketers. All of them are lurking in cyberspace. So parents who want their kids to take advantage of the Information Age are at the same time leery about letting them loose on the Internet. But on July 29, some of the Internet's best-known companies launched a major Web site that aims to put mom and dad at ease. Called GetNetWise,

children face online, based on age and activities. From ages 2 to 4, for instance, children fall into the "lapware" category, meaning parents need to explore the Net with them. Older children want to do more poking around on their own. But parents are still advised to stick nearby.

In the family tools area, parents can check off such criteria as "filters sex" and "blocks outgoing info." They then click on a button for links to products that accomplish those tasks.

You will find programs for limiting the amount of time kids can spend online, kid-oriented search engines that restrict the results of a child's query, and child-friendly browsers. For example, the free Surf Monkey browser, which can be found at www.surfmonkey.com, promises to block sites on drug use and bomb-making.

Meanwhile, filtering programs like SurfWatch, Cyber Patrol, and Net Nanny work with your own browser to block out violent, politically incorrect, or X-rated pages. Costs vary, and filtering programs have limitations. Most let parents

customize the sites they want blocked, although none of these programs can stop everything. And sometimes they block material you want your child to see.

So what happens if, despite your best efforts, your kid runs into trouble? The third area of the new site features links to the police, advocacy groups, and other places where you can report a problem. New York State residents, for instance, can submit an Internet crime report to the authorities. One link (www.missingkids.org/cybertip) takes you to the National Center for Missing & Exploited Children Cyber Tipline, which lets you report

Making Surfing Safe for Kids

- Pre-screen the Web pages that young children visit.
- Use filtering programs to block objectionable sites. But be aware that they sometimes let in inappropriate material and block content you think is OK.
- Place the computer in a visible spot, and stick close by when your child is online.
- Make sure your children ask your permission before surrendering personal information on the Net.

DATA: BUSINESS WEEK,
CENTER FOR MEDIA EDUCATION

the site is billed as a place where parents are "one click away" from reading tips and downloading tools that can help safeguard their children online. Years in the making, it's backed by the likes of America Online, AT&T, Walt Disney, Microsoft, Excite@Home, Lycos, and Yahoo!. Even Vice-President Al Gore has lent his support.

Here's a quick look at this comprehensive Web site, which parents can find at www.getnetwise.org.

GetNetWise is organized into four main sections: online safety guide, special browsers and other tools for families, areas where you can report trouble, and Web sites appropriate for children. The first section discusses the risks that

incidents of online child sexual exploitation.

Of course, the Web features many safe neighborhoods, and GetNetWise can help you and your kids find them. You can pore through approved site lists from the American Library Assn. and other groups, such as Net-mom's and the Children's Partnership. The CyberAngels' CyberMoms list of links is subdivided into science and nature, creative activities and fun, and other categories.

For all the help GetNetWise can give, the site doesn't offer independent assessments of the programs and organizations it points you to. For that reason, GetNetWise doesn't let parents off the hook. On or off the Web, no one is wiser about protecting your kids than you. □



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Nanny
you
the

**CATCH THE
PRE-IPO ACTION.
FUND FEES ARE
TOO HIGH**

BusinessWeek Investor

Private Equity For the Hoi Polloi?

Not quite, but you don't need to be superrich to buy in

BY ANNE TERGESEN

The rarefied world of private equity investment is opening up. Until recently, the option of buying stakes in hot companies before they went public was available only to a select few: insiders, institutional investors, and the superrich. But now the merely wealthy—and even average folk—can get in the door as financial-services firms roll out private equity products with lower minimum investments, and mutual funds start to dabble in the sector.

Interest in private equity investing is growing. With people wondering how much longer the stock market's runup can continue, many are looking to diversify the risks of a standard stock portfolio. Average investors also have been watching with envy as venture capitalists pocket billions from Internet and high-tech startups. In the past three years, venture-capital investments have returned an average of 32%, vs. 22.4% for all private equity deals, according to Venture Economics, a division of Thomson Financial Securities Data. After fees, private equity has returned 15% to 20% on average since 1980, vs. 17% for publicly traded stocks.

You can get the most private equity exposure at the least cost with a fund of funds, which pools investors' money to buy into more exclusive private equity funds. Although they require minimum investments of \$250,000 and up, that's a fraction of the \$10 million to \$20 million the private equity funds they invest in want. Brokerages, banks, and other financial-services providers currently offer about 75 private equity funds of funds—double the number that existed three years ago, says Venture Economics. Due to a 1996 federal law change, sponsors have opened the funds to more investors—500 instead of the 100 previously allowed. Now, managers can run parallel funds under both old and new rules, allowing up to 600 combined slots.

Lured partly by fat fees, several mutual-fund companies also are entering the private equity arena. "It was clear to us that we were missing an opportunity," says Steven Spiegel, senior managing director at Putnam Investments, the nation's fourth-largest mutual-fund company. On July 7, Putnam and private equity specialist Thomas H. Lee Co. announced

they will jointly launch several funds, possibly including one devoted to Internet companies. Another fund company, Pilgrim Baxter, is also developing a family of private equity funds.

Is a private equity fund of funds for you? Even if you can ante up the minimum, you must be a qualified investor. For funds governed by pre-1996 rules, you need a net worth of at least \$1 million. Funds set up under the new law require \$5 million in liquid assets, says Robin Painter, a partner in Boston law firm Testa, Hurwitz & Thibault.

STEEP FEES. You also must be willing to accept steep costs. Whereas the average mutual fund pockets \$1.37 of a \$1,000 investment, a fund-of-funds manager typically receives 1% of assets plus 5% of the profits. Investors must also pay the underlying funds' fees, which can be as high as a 1% to 3% management fee and 25% of the profits. Most funds also require investors to lock their money up in risky, illiquid stocks for 1

If you can live with these conditions around. These funds offer a variety of styles (table below) and channel money to 1 buyout firms, which

relatively established companies. One is the Independence Private Equity Securities, which spreads its \$60 million in assets among funds run by renowned LBO firms Apollo, Hicks, Muse, Tate & Furst; and Dubilier & Rice. Jeffrey Gendel, managing director at Independence Holdings Partners,

Mutual Funds

New Private Equity Funds of Funds

COMPANY	MINIMUM INVESTMENT*	FOCUS
WILSHIRE ASSOC.	\$1,000,000	Venture capital
BANK OF BOSTON**	500,000	Venture capital
INDEPENDENCE HOLDINGS	250,000	Europe
TH LEE, PUTNAM CAPITAL	Undecided	Undecided

*May be negotiable

**Based on information provided about the bank's first fund of funds

DATA: BUSINESS WEEK



...e firms have recorded average annual
...0% or more. Other funds of funds focus
...tech venture-capital deals. Whichever
...you prefer, don't dally. Private in-
...funds close to new investors when
...ised all the cash they need.
...can't afford the price of entry into a
...ands, a small but growing number of
...nds can give you limited private equity
...Under Securities & Exchange Com-
...ules, they can tie up only 15% of their
...such illiquid securities.

PRICES. Chip Morris, manager of the T.
...ce Science & Technology fund, says
...ual-fund managers are taking serious
...ivate Net companies rather than wait-
...them to go public at "extreme valua-
...rrently, less than 1% of Morris' fund is
...in a private business-to-business E-
...company, which he declines to name.
...is not alone. Growth stock manager
...n Wagoner had about 3% of the assets
...his funds in private deals as of Dec. 31.
...Wagoner Funds filed its most recent
...ort. One holding was Net sensation
...high subsequently tripled, to 80%, on its

first day of trading in March. The Warburg Pin-
...cus Post-Venture Capital fund currently has 6%
...of its \$130 million in private companies or ven-
...ture-capital funds, says Robert Janis, managing
...director. "We can get mutual-fund investors ac-
...cess to a style of investing that they couldn't do
...on their own," he says.

Some mutual funds with unusual structures
...are pursuing private placements even more ag-
...gressively. J&W Seligman raised \$580 million for
...a closed-end fund that will invest as much as
...35% of its assets in venture-capital funds and
...fledgling Net and high-tech companies. To be
...managed by Seligman's tech-stock guru, Paul
...Wick, the Seligman New Technologies Fund will
...have a \$10,000 minimum and a steep 3% up-front
...sales charge plus a 3% annual expense ratio. Un-
...like a regular mutual fund, investors can't with-
...draw their money anytime; they must wait for the
...fund's quarterly repurchases of 5% of its shares.

As such, the fund reflects some of the down-
...sides of investing in private placements. But as
...investors who've gotten in on the ground floor of
...many high-tech startups have learned, going the
...private equity route can be lucrative for those
...with the resources to hang tough.

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nment

HIGH FUND FEES HAVE GOT TO GO



BY ROBERT BARKER

Vast economies
of scale benefit
fund companies,
not investors.

Although 75% of my net worth is in mutual funds, I'm still offended by how many funds resist one simple improvement: lower prices. Like campaign finance, high fund fees have grown into a huge wart that's plain to see yet seemingly impossible to remove.

It all became uglier to me recently as I looked into the Investment Company Institute's new set of "best practices" for fund directors. The industry group started work on these guidelines after the Securities & Exchange Commission hosted a special meeting in February on how boards oversee mutual funds. To guard investors' interests, the law demands that every fund's board include some members who are independent of the fund company. But these independent directors have failed, and you can see it in how little fund prices have fallen. Since 1984, Morningstar reports, the average cost of actively run no-load U.S. stock funds fell less than 10%, even as their assets multiplied 32 times. Vast economies of scale benefited mutual-fund companies, not investors.

Now comes the industry's list of "best practices" for fund directors. Issued on July 7, the 15 items look good. For example, while the law sets 40% as the minimum proportion of inde-

pendent directors on a board, the best call for at least 67%. They also urge dependents to get their own lawyers at once, along with a lengthy list of other be more effective.

All are welcome. But don't expect to er at the expense of the fund sellers. cause boards overseeing much of the mutual funds already follow most or all practices.

How do I know? I asked each of the top 10 companies, holders of 46% of the country's assets, which best practices they I then tallied the results and scored company, except Morgan Stanley Dean did not detail its policies. The others? nine scored 92% or more (table). I taken off points for even minor de more would have scored 100%. All w been above 90%.

ONEROUS CHARGE. The trouble turns table's next column. It shows Morningtimate of each firm's annual revenue called "12b-1" marketing fees, perhaps onerous fund charge. The total take for firms: \$3.3 billion. In 1980, the total for was zero. That year, after a long run of turns and shrinking funds, the indu suaded the SEC to allow it to take m investors in the form of 12b-1 fees t marketing costs. The theory: Bringing ey into the funds would help them rebu and with economies of scale, fees wou

Assets since then have grown like

12b-1 fees pers pendent direct vote annually t them, and a fr tionale is that t port brokers w ongoing servic vestors. True, I Yet paying a strikes me as s sending Ford couple hundred year so that it its dealers and a familiar place t tires rotated.

That's why I SEC, now at wo own reforms, kills 12b-1 fe investors, it w one way they ge For the indepen rectors, it wou job they should themselves.

For barker.ont www.businesswee vestor/ or AOL, BW Daily.

Good Practices, Bad Fees

I asked each of the top 10 investment companies, ranked here by assets, which of the industry's new "best practices" they followed. As the scores below indicate, they all do well on that account. Where they fall short: Many still take staggering sums from investors via so-called "12b-1" fees to defray marketing costs.

FUND COMPANY	"BEST PRACTICES" SCORE	12b-1 REVENUE MILLIONS*
FIDELITY INVESTMENTS	100%	\$357.4
VANGUARD GROUP	95	0.0
AMERICAN FUNDS GROUP	82	697.2
PUTNAM INVESTMENTS	92	865.8
MERRILL LYNCH ASSET MANAGEMENT	95	354.7
FRANKLIN TEMPLETON GROUP	68	305.7
TIAA-CREF	97	0.0
SSB CITI ASSET MANAGEMENT	84	181.3
FEDERATED INVESTORS	100	64.8
MORGAN STANLEY DEAN WITTER	NA	522.1

*Annual estimates from current 12b-1 charges on net assets as of June 30, 1999 NA=Not available

DATA: MORNINGSTAR INC., INVESTMENT COMPANY INSTITUTE, BUSINESS WEEK



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Keyword: Billing



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ME FOR BIOTIME?



E. G. MARCIAL

the shorts'
a maker of
ic blood
ts. Drug
y takeover
es a lift
pharm.
ng a
food and
erce

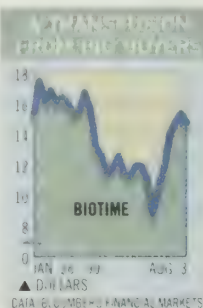
Investment pro Al Kingsley has had many home runs, both on the long and short side of the aisle. Once dubbed the genius behind corporate raider Carl Icahn, Kingsley now heads his own money-management firm, Greenway Partners. One stock that Kingsley is currently high on is BioTime (BTIM), which happens to be a current favorite of short sellers as well.

That doesn't faze Kingsley, who has acquired a 7% stake. He thinks the company, which develops synthetic blood solutions used for treatment of blood loss during surgery or traumatic injury, will be a huge winner for hospital patients as well as for investors. On Apr. 1, the Food & Drug Administration approved BioTime's blood-plasma expander Hextend, which is used in keeping patients' blood pressure high enough to ensure circulation during surgery. Abbott Laboratories has an exclusive marketing pact with BioTime to market Hextend in North America.

The shorts think BioTime's blood plasma expander has a limited market. They have had a lucrative time with the stock, as it tumbled from 21 a share in early April to as low as 8% on June 21. Of the 8.4 million shares in public hands, some 2.7 million are controlled by short sellers.

The bulls, however, continue to be optimistic as the stock recovers. It closed at 13% on Aug. 3. Analysts put the market for plasma volume expanders at about \$470 million. Abbott has started marketing Hextend, which it expects initially to get 10% of that market. BioTime President Ronald Barkin says Hextend sales should hit at least \$40 million in 2000 and \$70 million in 2001. One analyst figures BioTime will earn \$11 million, or \$1.18 a share, in 2000 and \$20 million, or \$1.50, in 2001.

Barkin says BioTime should sign a marketing pact with a large European drug company for the European market, similar to the Abbott deal, by yearend. A pact with a Japanese drugmaker is being sought for the Asian market.



NEW AMMO IN THE CANCER WAR

NeoPharm (NEO), a biopharmaceutical company focusing on products to fight various forms of cancer, is one small-cap stock that has thrived. The stock has run up from 2 a share in mid-August of 1998 to as high as 21 on Apr. 4, before easing back to 15 on Aug. 3. Dave Talbot, managing partner at Health/Vest Advisors, started accumulating shares at 4.

"Our 12 month target was 30, but with the recent surge in takeover in the drug industry, we wouldn't be surprised to see NeoPharm acquired for a minimum of 50 a share," argues Talbot. The most likely suitors, he says, are Bristol-Myers Squibb and Pharmacia & Upjohn. The latter has acquired a 5.4% stake in NeoPharm, which in February signed a licensing agreement with Pharmacia & Upjohn to develop and commercialize NeoPharm's lead products, LEP and LED, which are liposomal encapsulations of two common off-patent cancer drugs known as Doxorubicin and Taxol. NeoPharm's LEP and LED reduce toxic side effects, enabling patients to tolerate higher doses.

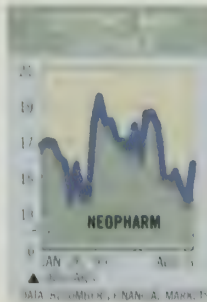
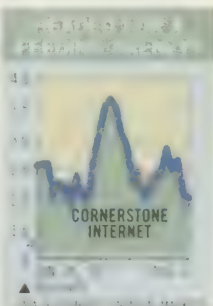
NeoPharm's products, he says, could compete with Taxol. Talbot suspects Pharmacia will also be interested in buying NeoPharm. Is it for sale? CEO James Hussey says a lot will depend on the price. "I haven't gotten any offers," he adds.

ZAPPING THE FAT IN RESTAURANT COSTS

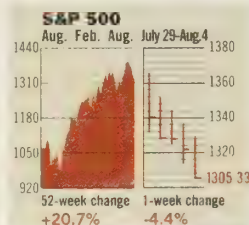
Barry Rubenstein, managing partner at Wheatley Partners, thinks investing in Internet plays is largely a question of valuation. He was an early fan of VerticalNet, buying in at 5 to 6 a share. The stock is now at 75. Juno Online Services went public in May at 13, six months after he bought shares at 5 each. The stock is now at 16%. So what is his latest play?

He has taken a shine to a cheapie: Cornerstone Internet Solutions (CNRS), now at 2 a share. The company, which is still in the red, specializes in business systems using Internet technologies. Cornerstone is a "technology solutions partner" for Microsoft, focusing on E-commerce services for Microsoft clients. One of its two units, usWeb/cks Cornerstone, delivers E-commerce solutions to large business-to-business systems. This unit is an affiliate of usWeb/cks Corp. Speculation is that usWeb may opt to acquire Cornerstone. usWeb/cks couldn't be reached for comment. Cornerstone Chairman Andrew Gyenes declined comment.

Cornerstone's other unit, B2BGalaxy.com, has real potential, says Rubenstein. It just launched FOODgalaxy.com, an Internet portal designed to cut the cost of food and supplies for restaurants and other food service providers. The system links buyers and sellers through competitive online bidding. Some 50 restaurants have signed up, including New York's Tavern on the Green and Sardi's. Max Klimavicius, president of Sardi's, says "the degree of control we'll have over costs and supplies through Foodgalaxy should double our bottom line." Cornerstone expects to post sales of \$10 million in 2000 and \$23 million in 2001. An analyst says the company should break even in 2000 and earn \$7 million, or 50c a share, in 2001.



STOCKS



COMMENTARY

A desultory week in the financial markets. The Nasdaq Composite index fell for five straight days—bringing its decline since July 16 to 11%. Leading the drop were the Net stocks. Investors were concerned that the upcoming July employment report will prompt the Fed to boost rates, and bonds were lackluster, reflecting that worry. The dollar was weak against the euro and yen.

Data: Bloomberg Financial Markets

U.S. MARKETS

	Aug. 4	Week	Year
Dow Jones Industrials	10,674.8	-2.7	25.8
Nasdaq Composite	2540.0	-6.1	42.2
Nasdaq 100	2204.3	-5.5	67.3
S&P MidCap 400	396.0	-3.9	19.2
S&P SmallCap 600	179.0	-2.5	6.1
S&P SuperComposite 1500	274.6	-4.3	21.0

SECTORS

	Aug. 4	Week	Year
S&P/BARRA Growth	729.5	-4.9	25.5
S&P/BARRA Value	595.3	-3.8	17.2
S&P Basic Materials	136.4	0.9	19.7
S&P Capital Goods	981.9	-4.4	23.3
S&P Energy	861.9	1.5	26.5
S&P Financials	132.0	-7.2	3.0
S&P REIT	80.7	-1.7	-11.4
S&P Transportation	681.6	-5.0	6.9
S&P Utilities	254.9	-0.5	10.8
GSTI Internet	365.2	-18.1	138.9
Morgan Stanley Cyclical	586.0	-1.8	24.6
PSE Technology	580.8	-4.2	74.5

BEST-PERFORMING GROUPS

	Last month %	Last 12 months %
Health-Care Services	14.2	Instrumentation 100.1
Semiconductors	8.0	Semiconductors 97.6
Oil & Gas Drilling	6.7	Computer Systems 73.4
Household Products	6.6	Aluminum 64.6
Forest Products	3.5	Communications Equip. 64.4

GLOBAL MARKETS

	Aug. 4	Week
S&P Euro Plus	1294.6	-1.2
London (FT-SE 100)	6235.4	-1.0
Frankfurt (DAX)	5119.4	-2.1
Tokyo (NIKKEI 225)	17,685.4	0.6
Hong Kong (Hang Seng)	13,591.0	3.4
Toronto (TSE 300)	6963.2	-2.1
Mexico City (IPC)	5142.9	-6.2

FUNDAMENTALS

	Aug. 3	Week ago
S&P 500 Dividend Yield	1.24 %	1.20 %
S&P 500 P/E Ratio (Trailing 12 mos.)	31.2	32.9
S&P 500 P/E Ratio (Next 12 mos.)*	23.5	24.4
First Call Earnings Revision*	-0.27 %	-0.29 %

*First Call Corp.

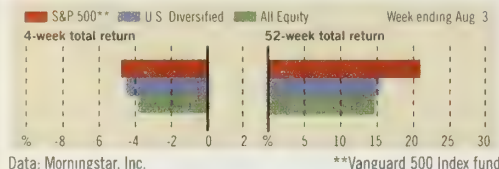
TECHNICAL INDICATORS

	Aug. 3	Week ago
S&P 500 200-day average	1265.9	1257.6
Stocks above 200-day average	48.0 %	54.0 %
Options: Put/call ratio	0.60	0.56
Insiders: Vickers Sell/buy ratio	1.49	1.49

WORST-PERFORMING GROUPS

	Last month %	Last 12 months %
Pollution Control	-50.9	Pollution Control
Transportation Services	-22.2	Manufactured Housing
Invest. Banking/Bkrgrg.	-21.7	Metal & Glass Containers
Personal Loans	-20.1	Toys
Genl. Merchandise Chains	-15.7	Apparel Manufacturing

MUTUAL FUNDS



EQUITY FUND CATEGORIES

Leaders	Laggards
Four-week total return	Four-week total return
Japan 5.4	Latin America -12.3
Diversified Pacific/Asia 0.6	Financial -7.2
Natural Resources -0.6	Diversified Emerging Mkts. -6.9
Foreign -0.7	Mid-cap Growth -5.7
International Hybrid -0.7	Pacific/Asia ex-Japan -5.6
52-week total return	52-week total return
Pacific/Asia ex-Japan 75.2	Latin America -16.5
Technology 71.8	Europe -4.5
Japan 63.2	Real Estate -3.2
Diversified Pacific/Asia 58.4	Financial -2.0
Communications 45.0	Precious Metals -1.4

INTEREST RATES

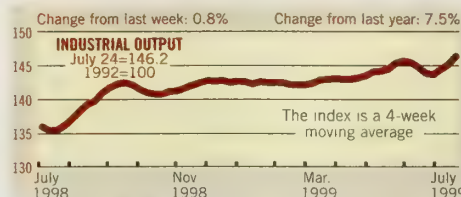
	Aug. 4	Week ago	Year ago
KEY RATES			
MONEY MARKET FUNDS	4.64%	4.61%	5.11%
90-DAY TREASURY BILLS	4.75	4.71	5.07
1-YEAR TREASURY BILLS	5.08	5.04	5.28
10-YEAR TREASURY NOTES	5.93	5.81	5.44
30-YEAR TREASURY BONDS	6.10	6.01	5.66
30-YEAR FIXED MORTGAGE†	7.95	7.78	7.06

BLOOMBERG MUNI YIELD EQUIV

Taxable equivalent yields on AAA-rated, tax-exempt municipal bonds, assuming a 31% federal tax rate	
10-yr. bond	
GENERAL OBLIGATIONS	4.78%
TAXABLE EQUIVALENT	6.93%
INSURED REVENUE BONDS	4.92%
TAXABLE EQUIVALENT	7.13%

†BancQuote, Inc.

BW PRODUCTION INDEX



Information on each of the index components is at www.businessweek.com.
BW production index Copyright 1999 by The McGraw-Hill Companies

The production index rose in July, ending July 24. The record-breaking wave that blanketed the country with electricity demand to rise record energy output caused the averaged index to jump to 147.9, from 145.4. After a slight adjustment, steel, auto, and other production increased. Declines in the output of oil, coal, and rail-freight traffic.

THE WEEK AHEAD

BEIGE BOOK Wednesday, Aug. 11, 2 p.m. EDT ▶ The Federal Reserve will release its report on regional economic activity in advance of its policy meeting on Aug. 24. Fed watchers will be interested in any anecdotal evidence that labor shortages are pushing up pay scales. Rising wages could prompt the Fed to hike interest rates at its upcoming meeting.

RETAIL SALES Thursday, Aug. 12, 8:30 a.m. EDT ▶ Retail sales probably edged up just 0.3% in July, says the median forecast of economists surveyed by Standard & Poor's MMS, a division of The McGraw-Hill Companies. Excluding vehicle pur-

chases, sales likely rose 0.4%. In June, total retail receipts increased only 0.1%, while nonauto sales grew 0.4%.

EXPORT-IMPORT PRICES Thursday, Aug. 12, 8:30 a.m. EDT ▶ Export prices were probably unchanged in July, the same performance reported for June. Rising oil prices, however, likely meant that import prices increased 0.2% in July, reversing June's 0.2% drop.

PRODUCER PRICE INDEX Friday, Aug. 13, 8:30 a.m. EDT ▶ The S&P MMS median forecast projects that producer prices of finished goods rose 0.3% in July, after dip-

ping 0.1% in June. Excluding food and energy prices, producer prices likely rose 0.1% in July, following a 0.2% June.

BUSINESS INVENTORIES Friday, Aug. 13, 8:30 a.m. EDT ▶ Inventories held by manufacturers, wholesalers, and retailers probably increased 0.2% in June, on a 0.3% advance in May.

BusinessWeek ONLINE

For more investment data and components of the production index, visit www.businessweek.com

x to Companies

ives the starting page for a story or
a significant reference to a company
aries are indexed under their own names.
listed only in tables are not included.

es (ABT) 125	Deloitte & Touche 34, 42
72	Delta Consulting 80
ications	Derringer 62
Devices	Deutsche Bank Alex. Brown 38
ent 81	Diamond Technology
(ZN) 4, 32, 81	Partners 72
Products	Digital Entertainment
AOL 32, 117	Network 34
D 32, 81	Dime Savings (DME) 45
118	Discover Brokerage Direct
(AAPL) 6, 12	(MWD) 81
84, 117	Donnelly (DON) 40
34	Dow Chemical (DOW) 38
	Dow Corning 38
	DreamWorks 84
	Dun & Bradstreet (DNB) 78
	DuPont (DD) 38
	E
	Eastman Kodak (EK) 42
	eBay (EBAY) 4, 32
	E-Crossnet 52
	emachines 6
	Ernst & Young 34
	E*Trade (EGRP) 32, 52, 81
	Excite@Home (ATHM) 84, 117
	Exxon (XON) 88
	F
	First Call 32, 88
	FOODGalaxy.com 125
	Ford (F) 40, 88
	Fortune Brands 88
	Future Shop 6
	G
	Genentech (DNA) 88
	General Electric (GE) 70, 88
	General Mills (GIS) 34
	General Motors (GM) 40, 88
	Goldman Sachs (GS) 34
	Go2Net (GNET) 84
	Greenway Partners 125
	GTE (GTE) 45
	H
	Health/Vest Advisors 125
	Heckler & Koch 62
	Hicks Muse Tate & Furst 118
	High Speed Access (HSAC) 84
	Hoyt & Co. 44
	Hughes Electronics (GMH) 128
	Humana (HUM) 45
	I
	IBM (IBM) 12, 45, 72, 88, 90
	Independence Holdings 118
	Instinet (RTRSY) 52
	Intel (INTC) 45, 70, 88
	Interim Services (IS) 72
	Intrepid Capital
	Management 32
	Village (VIL) 34, 118
	J
	Juno Online Services
	(JWEB) 125
	Junka & Voyles 70
	K
	Kaufman & Broad 88
	Keefe Bruyette & Woods 80
	Kleiner Perkins Cautfield &
	Byers 34
	Kobrick Funds 32

L
Lee (Thomas H.) 118
Lehman Brothers (LEH) 80
Lemonpop.com 34
Lennar 88
Levi Strauss 69
Liquid Audio (LQID) 84
Looking Glass Partners 4
Loomis Sayles 32
Loral Space & Communications
(LOR) 128
Lorcin Engineering 62, 67
Lycos (LCOS) 117

M
Manpower (MAN) 72
Marcus Cable 84
Marketwatch.com 32
McDonald's (MCD) 13
McGraw-Hill (MHP) 1, 126
Merrill Lynch (MER) 52, 78, 88
Metricom (MCOM) 84
Microsoft (MSFT) 4, 74, 81,
84, 88, 117, 125
Mills Corp. (MLS) 61
Momentum Securities 81
Monster.com (TMPW) 72
Morgan (J.P.) 52
Morgan Stanley Dean Witter
(MWD) 8, 52, 88, 122
Morningstar 122
Mossberg 62
Motorola (MOT) 54, 88
Munder Net Net Fund 32

N
National Semiconductor
(NSM) 45
Navegar 62
NeoPharm (NEO) 125
Nike (NKE) 54, 69
NuVoMedia 4

O
Onsale (ONSL) 32, 74
Oracle (ORCL) 74
Oxygen Media 84

P
PepsiCo (PEP) 13
Perry Partners 32
Pharmacia & Upjohn
(PNU) 125
Phoenix Arms 67
Pilgrim Baxter 118
Priceline.com (PCLN) 84
PricewaterhouseCoopers 6, 40
Procter & Gamble (PG) 44
Putnam Investments 118

Q, R
Qualcomm (QCOM) 54
Railways Pension Trustee 52
RainmakerThinking 34
Raytheon (RTN.B) 54
Remington 62
Renaissance Capital 45
Reuters (RTRSY) 52
Road Runner 84
Roche Holding 88
Rolex 4

S
Salomon Smith Barney (C) 38,
74
SBC Communications
(SBC) 45
Schwab (Charles) (SCH) 52
S.C. Johnson & Son 38
Seligman (J. & W.) 118
Senna Products 4
7-Eleven (SVEV) 69
Sheraton Hotels (HOT) 54

Smith & Wesson 62
SoftBook Press 4
Sotthely's (SID) 4
Southwest Airlines (LUV) 70
Spare Kaplan Bischel 72
Spelling Entertainment 8
Spencer Stuart 70
Sportscorp 61
Sprint (FON) 45
Standard & Poor's (MHP) 90,
126
Stanford Federal Credit
Union 8
Starbucks (SBUX) 13
Sterling Foster 78
Sturm Ruger (RGR) 62
Sun Microsystems (SUNW) 45,
74
Sunoco (SUN) 88

T
Taurus International
Manufacturing 62
Testa Hurwitz & Thibault 118
Texaco (TX) 88
Texas Instruments (TXN) 8
theglobe.com (TGLO) 32
TheStreet.com (TSCM) 32
Thomson Financial Securities
Data 118
3Com (COMS) 12
Tiger Management 45
Time Warner (TWX) 34, 45, 84,
88
TMP Worldwide (TMPW) 72
Tomkins 62
Toshiba 12
Tradepoint 52
T. Rowe Price (TROW) 118

U
Union Carbide (UK) 38
United Parcel Service 81
United Technologies (UTX) 42
US Airways (U) 45
U.S. Bancorp Piper Jaffray 6
USWeb Cornerstone 125
USWeb Corp. (USWB) 125
USX (X) 40

V
Van Wagoner Funds 118
Venture Economics 118
VerticalNet (VERT) 125
Viacom (VIA.B) 8, 84
VIA Technologies 45
Vulcan Ventures 84

W
Wal-Mart (WMT) 44, 70
Walt Disney (DIS) 117
Warburg Dillon Read 34, 52
Warburg Pincus Post-Venture
Capital 118
Waste Management (WMI) 45
Westinghouse (CBS) 6
Wheatley Partners 125
World Wrestling Federation
Entertainment 45

Y
Yahoo! (YHOO) 32, 81, 117
Young & Rubicam (YNR) 45

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Tuesday

Want to install some software stocks in your portfolio? Brian Goodstadt of Standard & Poor's can name the best of the breed in this chat co-hosted by S&P Personal Wealth. **Aug. 10 4:30 p.m. EDT**

Thursday

Paul Cherney, market analyst for S&P's MarketScope, is adept at figuring the best price levels for buying or selling stocks. Get his help in your investment decisions. **Aug. 12 9 p.m. EDT**

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SAY YES TO SERIOUS GUN CONTROL

When it comes to gun ownership in America, personal liberty has long been defined in terms equal to anarchy—no rules, no regulation, no nothing. Extremists on the fringe of society have all too effectively manipulated symbols of American culture to propagate a myth of the individual standing alone against bandits, “foreign” enemies, and the government itself. A culture of violence has replaced common sense, and the moderate voices of responsible hunters and sport shooters have been silenced. Congress, cowed by the lobbying power of the National Rifle Assn., cannot even bring itself to put real guns under the same consumer safety regulation applied to toy guns. Something must be done.

It appears that the American people are finally about to act. Polls show that an overwhelming majority want much tougher restrictions on handguns. In the wake of the bloody shootings by an unhinged day trader in Atlanta and by schoolchildren in Colorado and Arkansas, most Americans say they are more likely to vote for a Presidential candidate in 2000 favoring stricter gun control.

The obvious answer is to limit ownership and require registration of all guns and licensing of all gun owners. In Switzerland and Israel, where most citizens serve in the military and remain in the reserves, nearly all households have weapons. But each rifle and pistol is registered with the government, and each user undergoes months of training. In the U. S., licensing is already a way of life for hunters who must buy permits from local authorities to shoot a limited number of deer and ducks each season. A few states and localities already require registration of guns. Extending this kind of local regulation throughout the nation and ensuring that people know how to maintain their weapons re-

sponsibly is the best way to cut gun violence. Democratic Presidential contender Bill Bradley has come out in full registration. He's right.

It is also vital to crack down on the handful of gunners who time and again provide weapons to criminals. Statistics from the Bureau of Alcohol, Tobacco & Firearms show that most weapons used in crimes come from this group of dealers. The ATF should shut them down. At the same time, buyers at gun shows and flea markets should be subjected to the same criminal background checks as those purchasing directly from dealers. The ludicrous loophole in the 1993 Brady bill that allows any private gun owner to sell his weapon to anyone anywhere has to be closed.

The gun industry itself is beginning to split under political pressure. There are companies in the South that produce cheap “Saturday night specials” and pump-action automatic weapons that skirt the law. These “Ringier” companies play to the apocalyptic fears of survivalists and anarchists who want to get “off the grid” of normal society and oppose any form of government. Then there are the established Connecticut Valley companies that make expensive, quality handguns and hunting rifles. They are customers are increasingly open to the kind of sensible regulation that the police support in every town across the U. S.

Sometimes the obvious must be stated. There is no rational reason for any individual to own assault weapons. There is no reason most people, especially those with children, should own handguns. There is no reason extremists should determine government gun policies that threaten the lives of innocent people. It's time for serious gun control.

SHORTSIGHTED ABOUT SATELLITES

When charges surfaced last year that satellite makers Loral Space & Communications Ltd. and Hughes Electronics Corp. gave China critical technology that could improve the reliability of its missiles, Congress moved swiftly—and did the wrong thing. It blamed the trade-oriented Commerce Dept., which had taken over authority for satellite-export licenses in 1996 from the State Dept. In a pique, Congress switched it back to State, which, in classic cold war fashion, treats satellites as weapons, not telecommunications devices. Now, State's tighter controls are needlessly hurting satellite exports. For no good reason.

Two of the three launches in which Loral and Hughes were said to have aided China were actually approved by State in 1991 and 1992. Commerce wasn't to blame. Senator Chuck Hagel (R-Neb.), a rising star in GOP foreign-policy circles, thinks Congress overreacted and should reverse itself.

The earlier transfer to Commerce, begun under the Bush

Administration, made sense. When satellites were used for military equipment, they belonged on State's Munitions List, along with tanks and fighter jets. But commercial satellite revenues now outpace military space sales. In 1997, commercial birds went aloft, vs. 63 government satellites.

Commerce is better suited for dealing with commercial satellite sales. Its licensing process is transparent and relatively quick. State's procedures have no deadlines and require congressional notification. Lawmakers can deny licenses without giving a reason. State's rigorous licensing system makes sense for weapons, but it's driving business to Europe. The aerospace industry says it has already lost \$1 billion in sales as clients steer clear of State's red tape. Loral and Hughes illegally or inappropriately transferred sensitive missile technology to the Chinese, as China should be punished. But this can be done under Commerce jurisdiction. Congress made a mistake. It should

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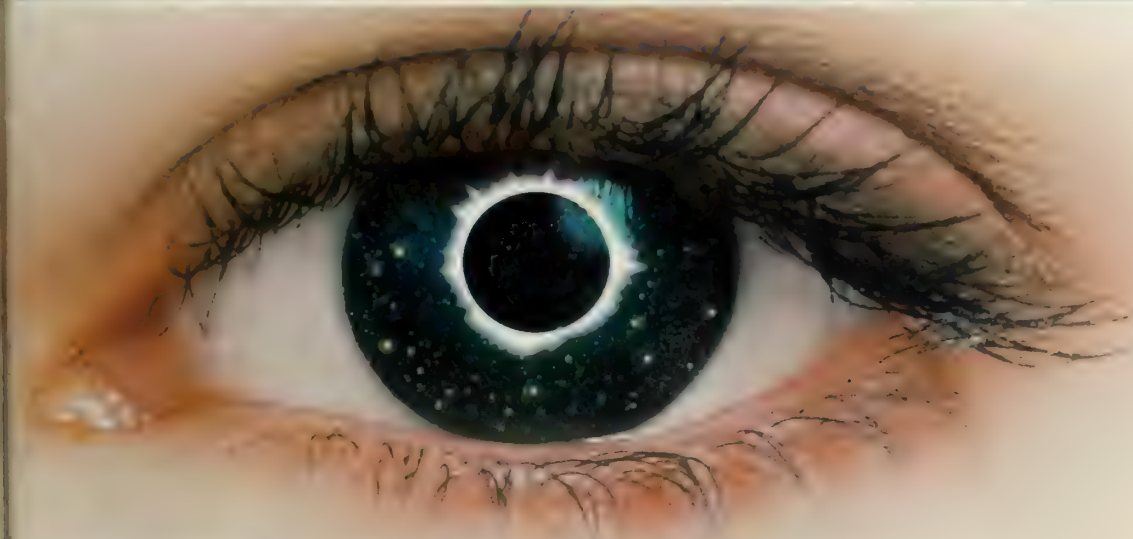
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**UNFINISHED
REVOLUTION**
Argentina's stalled
reform efforts page 60

**HEADHUNTER
TROPHY?**
Ann Livermore
may not be CEO
of HP, but... page 69



**UP, UP,
AND AWAY**
What's jacking up
insurance costs page 215



BusinessWeek

AUGUST 23-30, 1999



BALANCING ACT
For investors, profits
vs. rate hikes page 185

**SILICON
SWAMP**
High-tech
startups are
flocking to
the D.C. area
page 168



ON COURSE
A small jump
won't tip over
economy
page 38



News: Analysis & Commentary

- 38 WILL HIGHER RATES CHOKE GROWTH?**
This expansion may withstand them
- 40 A TALK WITH THE TREASURY CHIEF**
- 41 IF RATE HIKES HURT HOUSING...**
...That could slow the entire economy
- 42 COMMENTARY: NEWT GINGRICH**
- 44 DISCONNECT AT AT&T?**
Now, it may sell Excite@Home
- 46 COMMENTARY: MOTOROLA**
The case for hanging up on Iridium
- 48 DAEWOO RUNS OFF THE ROAD**
Where the Korean carmaker went wrong
- 50 HUIZENG'S LATEST U-TURN**
AutoNation stills faces lots of potholes
- 52 IN BUSINESS THIS WEEK**

International Business

- 58 HONG KONG: MARKETS**
A new bourse just for tech startups
- 59 SWEDEN: INVESTOR**
Can the Wallenbergs turn it around?
- 60 ARGENTINA: A JOB HALF DONE**
What will become of economic reform?
- 66 INTERNATIONAL OUTLOOK**

Economic Analysis

- 26 ECONOMIC VIEWPOINT**
- 30 ECONOMIC TRENDS**
- 35 BUSINESS OUTLOOK**
- Government**
- 54 WASHINGTON OUTLOOK**

People

- 69 THE VALLEY'S HOTTEST PROPERTY?**
Ann Livermore may not be long for HP

Information Technology

- 168 WASHINGTON'S WIRED BUNCH**
The D.C. region is a high-tech hotbed

Management

- 180 COMMENTARY: SAY ADIEU, EX-CEO**

The Corporation

- 182 HOW LEAN CAN BOEING GET?**
It's making bold promises

Finance

- 185 THE MARKET HAS TWO FACES**
Rising rates vs. strong profits
- 188 COMMENTARY: ACCOUNTING**
The bad news on goodwill
- 193 FIRST UNION: NOT THE LAST**
The bank is still big and profitable

BusinessWeek Invest

- 215 LIFE INSURANCE: PREMIUM**
- 222 FINDING GOLD IN OLDIE STOCK**
- 226 JAPAN: NEW FAITH FOR INVESTORS**
- 230 THE BARKER PORTFOLIO**
- 235 JEFF LADERMAN: INSIDE WALL STREET**

Features

- 6 UP FRONT**
- 12 EDITOR'S MEMO**
- 13 READERS REPORT**
- 19 BOOKS**
- 236 FIGURES OF THE WEEK**
- 237 INDEX TO COMPANIES**
- 238 EDITORIALS**

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INTRODUCTION

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power plants—running on palm
oil and pure gas—are on the way

GLOBALISM

the world's disunited nations

MANAGEMENT

any of the trailblazing corporate
strategies will be a thing of the past

HI-TECH

automated manufacturing isn't fantasy

TIME

the rhythms of days and
nights will yield to the Constant Now

RELIGION

the pious and the faithful will look to
the Net for questions and answers

IMMORTALITY

the human mind will become immortal

ENVIRONMENT

what if the forests were silent?

106 COMMUNICATIONS

The Net will give us all the chance to
display our inner artist

110 CITIES

New neighborhoods can combat
urban sprawl

114 BIOLOGY

Microbes that originated eons ago may
reveal secrets of the sources of life

117 ARTIFICIAL INTELLIGENCE

Silicon will give birth to superbrains

124 HEALTH

The rise of preventive medicines

132 INTERNET

The Earth will use the Internet to
form an electronic skin

136 MONEY

In the new financial cosmos, it'll be
safer to take a dare

140 DEMOGRAPHICS

Shrinking birth rates turn support
systems for retirees into a Ponzi scheme

144 POLITICS

It's back to direct democracy, Web-style,
as pols canvass voters at home

146 EDUCATION

Is high school obsolete?

152 GENES

Intrepid explorers will decipher the
blueprint of human life

156 LIFESTYLE

People will think nothing of moving to
Nairobi or Nanjing in search of riches

160 QUANTUM COMPUTERS

Will subatomic particles replace silicon?

164 A PERSONAL VIEW

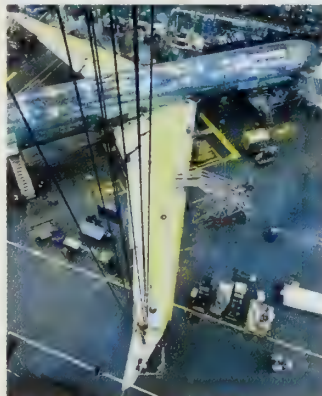
A bold new world is coming. But let's
hope a little of the old world survives



PLUS: A Sci-Fi Guide to the 21st Century (foldout poster, opposite page 116)

Up Front

EDITED BY ROBERT McNATT



WILD BLUE YONDER

LABOR MIGHT GROUND BOEING

IS BOEING HEADED FOR A crash landing in its labor talks? For months, the company has been informally negotiating with the International Association of Machinists, whose contract covering 48,000 employees expires on Sept. 1. But with formal talks set to open on Aug. 16, union leaders now warn that a strike seems

ever more likely. The sticking point: job security. Despite making a record number of planes this year, Boeing still plans to cut 20% of its workers by next year, fearing an order slump.

BUSY: But The IAM has suggested Boeing could guarantee a set number of jobs or extend a three-month moratorium on subcontracting, also set to end Sept. 1.

CEO Philip Condit has been willing to listen, says the union. But COO Harry Stonecipher, who has clashed with Condit and the IAM in the past, has vetoed everything. "We think Stonecipher is going to be the deal-buster," says IAM chief negotiator Richard Schneider. Boeing spokesman Peter Conte says it "remains hopeful we can make an agreement that balances everyone's interests." The time to do that, however, is running out quickly. *Aaron Bernstein*

BANKRUPTCY BLUES

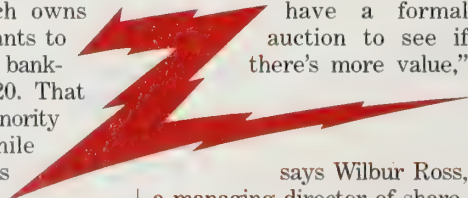
MORE ANGST OVER ZENITH

ANYONE REMEMBER ZENITH Electronics? The last U.S.-owned TV maker has had heavy losses for 13 of the past 14 years. South Korea's LG Electronics, which owns 55% of Zenith, wants to file for a packaged bankruptcy on Aug. 20. That would wipe out minority shareholders, while giving bondholders 50¢ on the dollar and 100% ownership to LG.

But some shareholders, led by the California Public Employees' Retirement System, which holds 1 million shares, are raising a stink. Determined not to lose their investment, they say the "new" Zenith, an R&D, sales, and

marketing company, could be worth more than the \$309 million that a bank says it's worth. They want the bankruptcy court to sell Zenith, although LG said it has tried. The company says 15 other parties were given a chance to acquire Zenith. None was interested. "It's appropriate to have a formal auction to see if there's more value,"

says Wilbur Ross, a managing director of shareholder adviser Rothschild. Zenith says that when it is restructured, it will make money—\$500,000 on sales of \$935 million in 2001. Shareholders still aren't happy. Hey, maybe they should just offer the company on eBay instead. *Richard A. Melcher*



TALK SHOW "Day trading isn't investing; it's at best speculating"

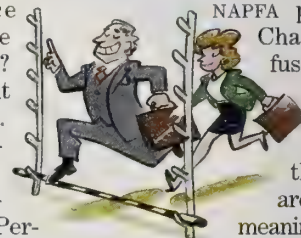
—David Shellenberger, chairman of the day-trading project of the North American Securities Administrators Association

I-WAY PATROL

MICROSOFT: YOUR NEW FINANCIAL GURU?

MICROSOFT AND DALBAR, a Boston-based investment research firm, are going to link investors with financial pros. In mid-August, they plan to unveil a revamped Web site, therightadvisor.com, that's a new version of Microsoft's old financial-advice site. But are the advisers any good?

You might want to be cautious. The site previously used advisers from the National Association of Personal Financial Advisors, who are subject to peer review, work only on a fee-for-service basis, and have continuing-education requirements.



A tiff ensued when Dalbar felt it was being shunned for less qualified advisers, who pay to be on NAPFA's list. NAPFA ended up with a tiny link to its own site.

Dalbar is recruiting advisers. Requirements include years' experience with securities violations and annual payment of up to \$10,000 to be listed. "It's a joke," says NAPFA planner Chasoff, who refused the deal. Dalbar has since added 3,000 "independent" advisers, meaning that the list is now 10,000 advisers. Dalbar has submitted a list of advisers to NAPFA and passed a test. NAPFA says that NAPFA's 60 advisers are too few for the site's needs. *Roy F.*

EX LIBRIS

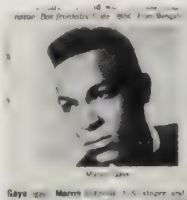
THE LAST WORD IN NEW WORDS

SURROUNDED BY "SLUGS" eager to take over your "work plane"? Losing sleep over the next "creepback"?

Do you know what any of this means? If not, take a gander at the new *Encarta World English Dictionary*, just out in hardcover—and CD-ROM—by Microsoft and St. Martin's Press. The companies call it the first completely new dictionary in 30 years. It's replete with thumbnail pop-culture bios, ranging from singer Mar-

vin Gaye to punk diva Vivian Westwood, and workplace slang. They are trendy cyberlocutions like "Netizen" and "digizing" and E-mail shorthand like "TMOT" ("trust me on the net").

Will these words stay? A spot at rival Merriam-Webster wouldn't comment on the choices, but diplomatically says that computer dictionary involves "a full procedure for measuring longevity." The editor, Soukhanov, concedes that there will be future revisions.



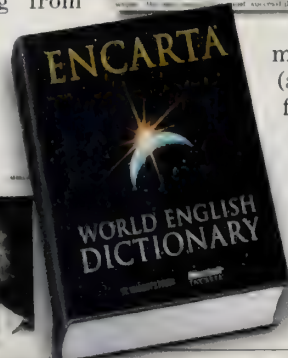
Says Gaye: Marvin Gaye (1938-1978) singer and songwriter

INDEXED:

Viv and Marvin



Westwood: Vivian Westwood (1943-1990) singer and activist



maybe her work (a wheeled desk) will be safe from slugs (car pools) and her office creepbacks (rehirings of off workers) at least for now. *Hardy*

AROUND THE GOLF COURSE,
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STYLISH OR DEPENDABLE AS
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Up Front

SPORTS BIZ

L.A.'S HEAVENLY SUITES

ALTHOUGH THE LOS Angeles Dodgers are cellar dwellers now, some of their well-heeled fans will live high come 2000. Next year, 37-year-old Dodger Stadium, the last big-league ballpark without skyboxes, will get them. And unlike those at other ballparks, these come with a host of unusual extras.

The 30 suites cost the team about \$45 million. Half are taken, at prices from \$185,000 to \$390,000 for a full year. At Yankee Stadium, by contrast, the annual tab is just \$150,000. A Dodger spokesman says the team didn't feel it could afford to build the suites until a deep-pocketed new owner, Fox Entertain-

ment Group, bought the team in 1998. Prices are high, but the team wanted to offer entertainment, not just a fancy seat.

Rent a suite, and you can lunch with



TOMMY LASORDA: Visiting a skybox

manager Davey Johnson or expect Dodger personalities such as Tommy Lasorda to drop by. The team will fly you, gratis, to spring training. If the Dodgers get into the World Series, you get free tickets for away games. And players will coach your kids at the Stadium and take batting practice with you. As the fans used to cry when the Dodgers were in Brooklyn: Wait till next year! □

PRODUCT PEEK

AN SAT FOR COMPUTER GEEKS

COLLEGE STUDENTS HUNGRY for high-tech jobs will get a chance to measure their computer skills when they return to campus this fall. In Octo-



WIRED? Washington & Lee

ber, a coalition of 15 Virginia schools, including Washington & Lee and Lynchburg College, will offer students nationwide an early shot at Tek.Xam, a standardized test to measure Web-site building skills, among others.

The hope is that Tek.Xam will become to college grads what the SAT is to high school seniors, says Mark Warner, the founder of investment firm Columbia Capital who persuaded the Virginia Foundation of Independent Colleges to develop the test. If the test catches on, it could serve to connect tech-savvy liberal arts majors with tech-related businesses and ease the chronic shortage of info-tech workers in the U.S.

Some 300 students have taken the six-hour pilot tests so far. Dozens of companies, including AT&T and EDS Communications have endorsed the project. Right now, all that high scorers earn is a certificate and bragging rights for their résumés. But one company, First Virginia Banks, has relied on the results to select job candidates. Now for the real test—to see how they do in their jobs. *Lorraine Woellert*

DRAWN & QUARTERED



"With fifteen percent of the money could we're ready to project a winner."

UNCOMMON MARKET

A FENDER-BENDER FOR THE EURO

IF YOU THINK IT'S HARD TO figure out what a car really costs in the U.S., take a look at Europe. The euro was supposed to equalize pricing. But not all countries use it, so prices vary as much as 30% from nation to nation for the same model. Prices also vary when carmakers try to impose higher prices at home than abroad.

The result? Price gaps are widening, says a new study from the European Commission.

For example, a BMW 318i costs £21,600 (\$37,700) in England, 30% more than the euro-denominated price, converted to pounds, in Holland.

The Dutch use the euro, not the British—who car prices are partly the pound's appreciation against the euro. It's a story in Sweden and

The Volkswagen 18,500 euros in Germany, 25% more than it costs in Denmark, as VW thinks Germans will pay a premium. But VW has pressured dealers outside Germany to sell to Germans. That's and trans shopping



BMW Costs in England

keeps rising. The carmakers are resisting. In 1998, VW fined for such practices in Italy. The EC is bringing similar cases against German Opel unit and DaimlerChrysler. *William E.*

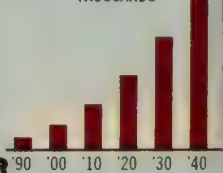
THE BIG PICTURE

HAPPY BIRTHDAY! YOU'RE 100!

Assuming a slow improvement in life expectancy and falling mortality rates, the government believes the U.S. will have many more centenarians in coming years.

PROJECTED NUMBER OF CENTENARIANS IN THE UNITED STATES

THOUSANDS



PROJECTIONS ARE BASED ON A JULY 1 ESTIMATE OF THE RESIDENT POPULATION IN 1990. IN TURN IS BASED ON THE ENUMERATION CENSUS. ASSUMES MODERATE FERTILITY EXPECTANCY, AND NET MIGRATION LEAVE.

DATA: U.S. CENSUS BUREAU

FOOTNOTES Manufacturing CEOs who worry about falling product prices: 70%; vs. all CEOs who worry about the issue



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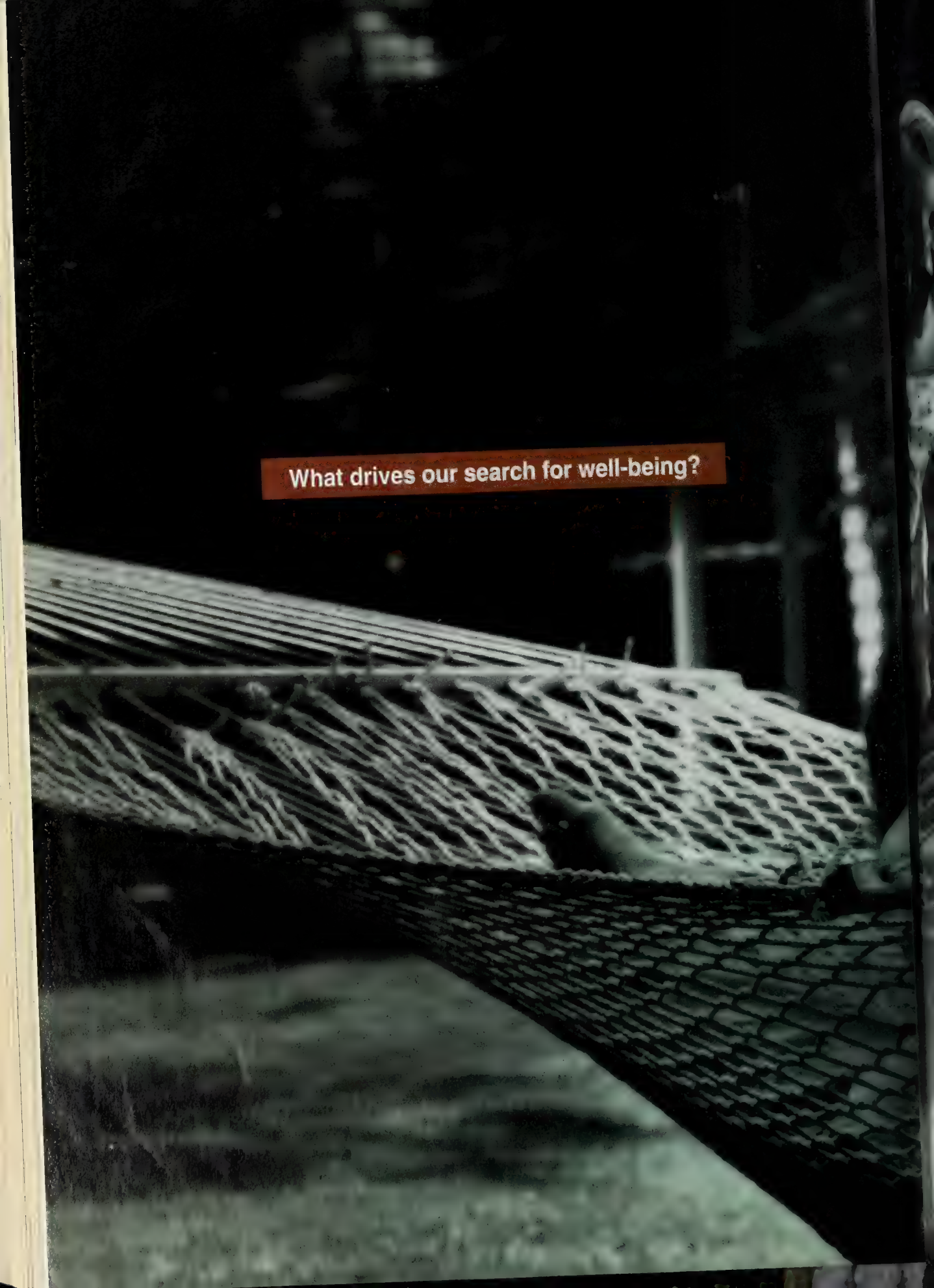
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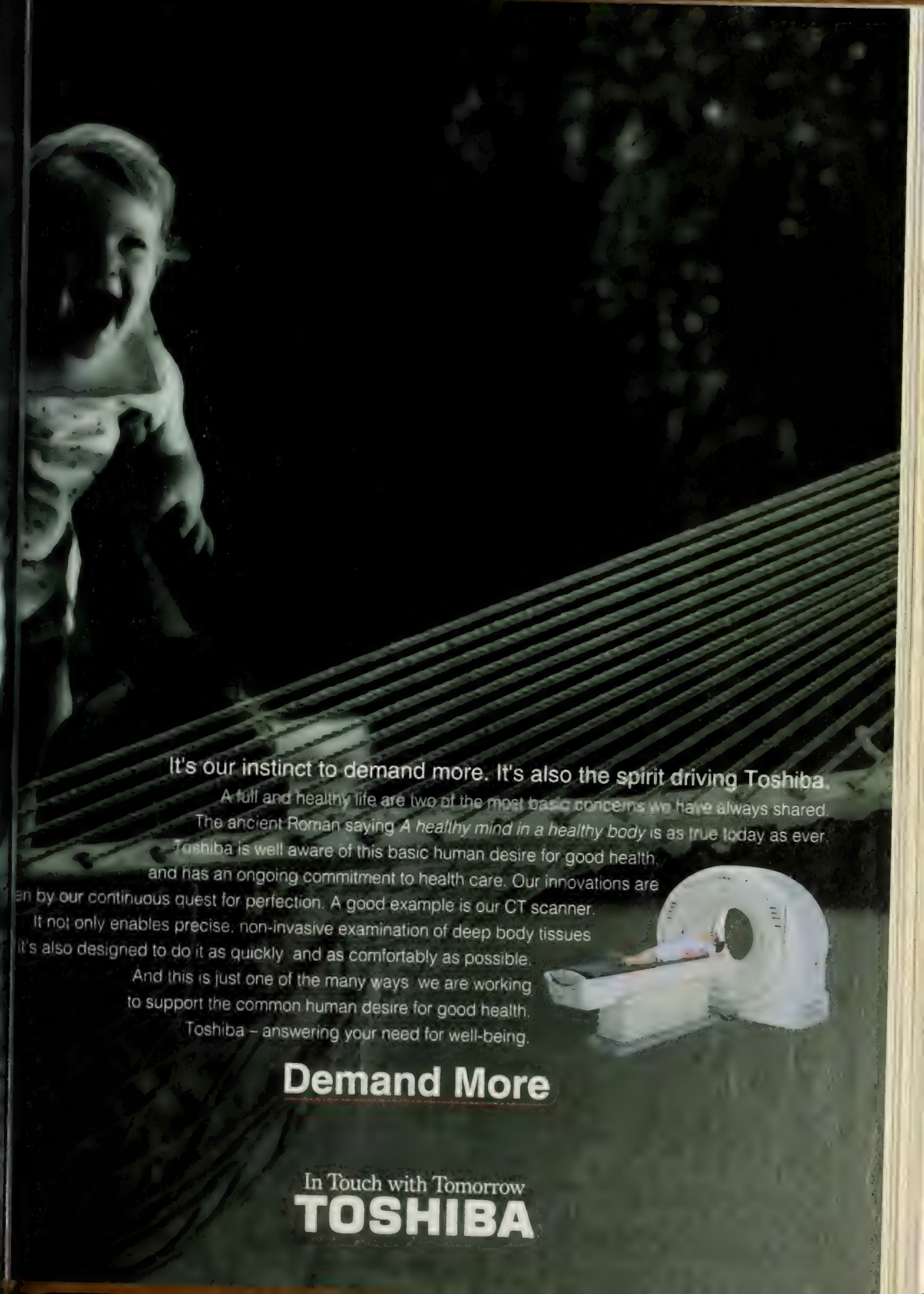
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It's our instinct to demand more. It's also the spirit driving Toshiba.

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Toshiba is well aware of this basic human desire for good health,

and has an ongoing commitment to health care. Our innovations are

born by our continuous quest for perfection. A good example is our CT scanner.

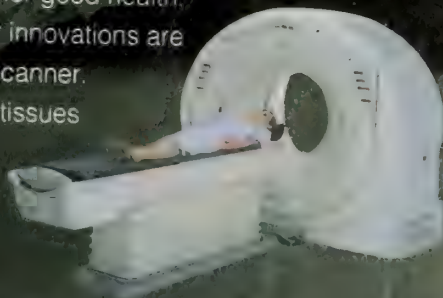
It not only enables precise, non-invasive examination of deep body tissues

it's also designed to do it as quickly and as comfortably as possible.

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to support the common human desire for good health.

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A LOOK AT THINGS TO COME

We began work on "21 Ideas for the 21st Century" by asking a dozen or so BUSINESS WEEK writers and editors to think of ways we might try to catch the spirit of the new millennium without making a lot of dubious predictions. Trying to predict the future has always been a risky business, and it's even tougher in the hyperspeed Age of the Internet.

We decided a more productive approach might be to present some of today's most far-reaching ideas—along with the people behind them. We'll wager that some of these ideas and thinkers will have a powerful impact on whatever trends do emerge in coming decades.

Included here are such thinkers as Leon Botstein, the president of Bard College, who advocates doing away with high school. (You might want to think twice before sharing that idea with teenagers in your family.) You will also meet James C. Ellenbogen of Mitre Corp. He is a leading practitioner of the craft of nanotechnology, the fabrication of structures far smaller than the individual magnetic grains on your computer's hard drive. Some envision a "nanobox" that could assemble individual atoms into an up-graded cell phone or any other gadget you might need.

We also spent a day with John Gruetzner, a 38-year-old executive living a nomadic existence that could become far more common in the next century. A photo essay gives you a taste of Gruetzner's ragged, rugged life on the road.

We look at the globalization, oppression, and fragmentation of the world itself. It was only in this century that the current time zones gained credibility, giving some order to time in a slowly shrinking world. In the next century, those time zones will increasingly become a quaint reminder of what it was like before many of us began living our lives in many time zones at once. And we explore the amazing persistence of religion, which some forms of worship have remained largely unchanged for millennia.

For an added flavor, we asked science-fiction authority Eric Rabkin of the University of Michigan, to combine classic works of science fiction to uncover imaginative predictions that just might come true.

These are just a few of the ideas and people inside this issue. We hope you will find them provocative, inspiring, and, just important, a pleasure to read.

My thanks to the team of thinkers who led this project: Chief Economist William Wolman, Senior Editor Paul Raeburn, Associate Editor Peter Coy, and Senior Writer Neil Gross. The package was designed by Senior Art Director Francesca Messina and freelance Mimi Park, working with Photo Editor Kathleen Moore. Many other writers and reporters brought their ideas, wisdom, and visual grace to this stimulating issue.

Stephen B. Shepard
 Editor-in-Chief

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EO PUT BUSINESS E POLITICS

The saga of Lloyd Ward," (Cover Aug. 9), you ran afoul of one mission. The rise of Fannie Mae's Franklin D. Raines to become the first African-American CEO of the company largely in the world of business politics.

Raines has spent 18 of the last 20 years in business at Lazard Frères & Co. and at Fannie Mae. His tenure at Fannie Mae as Vice President of Management & Budget, notable for his having balanced the federal budget, constituted only two of the past two decades.

David Jeffers
President for corporate relations
Fannie Mae
Washington

OW, THE CITY OF ERLY TAX RELIEF

Brotherly Love continues to cost less ("The List: Brotherly love, but not for you," Up Front, July 19). Though the study cited rightly takes Philadelphia's historic tax structure into account, it failed to note how the city's tax structure is changing—Philadelphia's taxes have dropped more than in any other city in the survey from 1990 to 1998.

On Jan. 1, 1996, Philadelphia's business privilege tax has been reduced by 10%, and the city's wage tax by 7%. At the same time, we have reduced the city's personal property tax, which was not included in the study. All told, the first five years of the tax-reduction program will have resulted in cumulative savings of nearly \$1 billion for our taxpaying business and citizens, and our new five-year plan includes further tax reductions each year.

There is no question that Philadelphia can do more to reduce taxes for those who bring business to our city, we have made remarkable progress.

Edward G. Rendell
Mayor
Philadelphia

JAL, BLAME FALLS E BUTLER

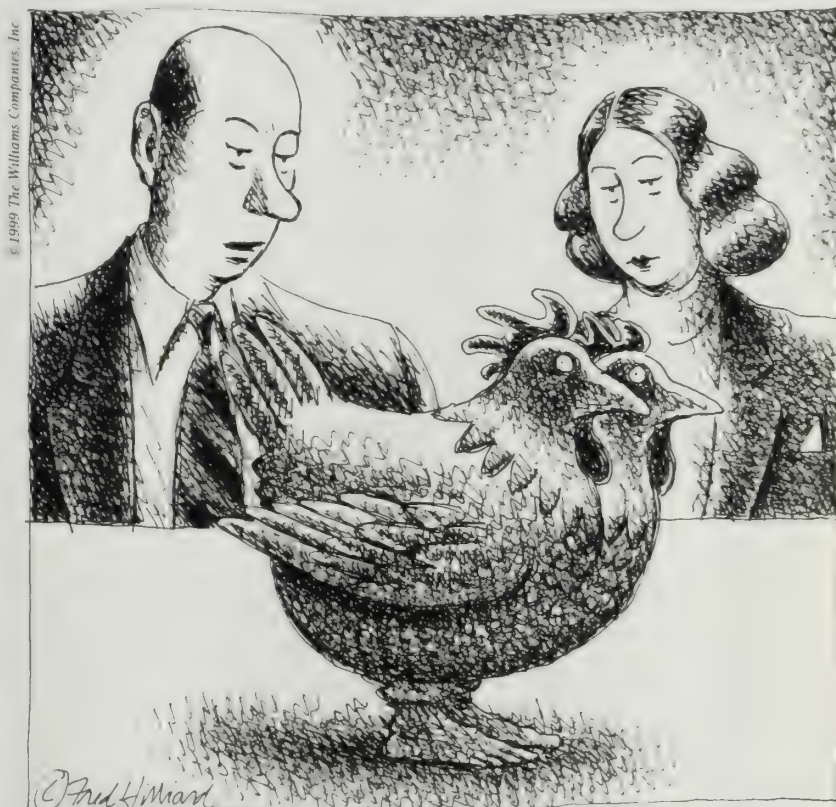
It's sorry to read that your recent experience with our butler Jeeves didn't do it," Technology & Design (Aug. 2). It was especially disappointing because Jeeves offers such

great service to millions of Internet users every month.

At Ask Jeeves, our mission is to make the Internet a more usable and human-friendly place by letting people interact on the Web the same way they interact in the real world—through questions and answers. What's unique is that our question-answering service has been cleverly engineered to learn from

experience. Jeeves gets smarter by the day with every new question asked, and with users asking Jeeves more than 1.2 million questions daily, Jeeves' I.Q. is getting higher by the minute. When information isn't available through our service, our editors are signaled to add the answer, allowing Jeeves to surface it when the question is asked again.

However, what runs most contrary



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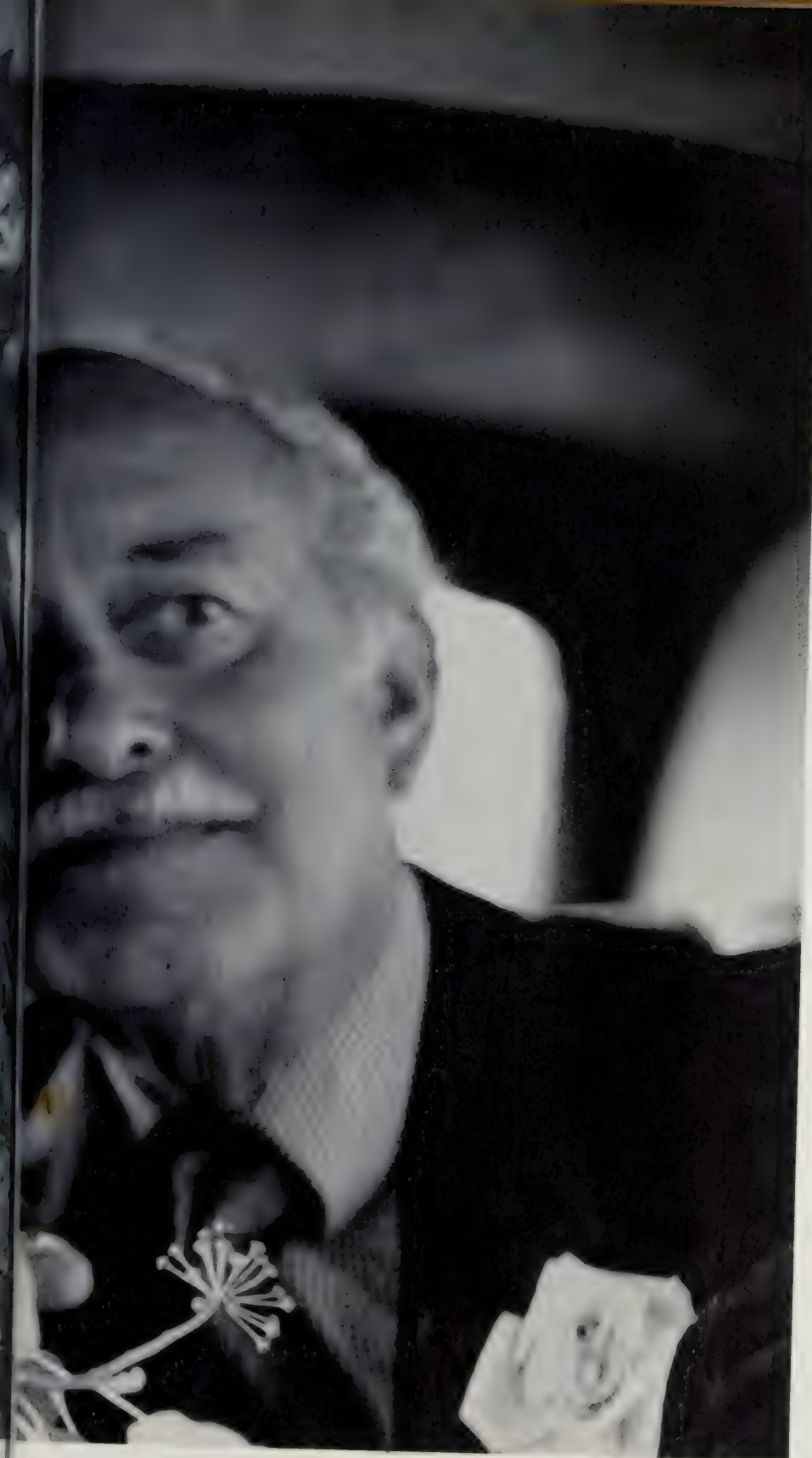
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Readers Report

to your reporter's viewpoint is that for the third quarter in a row, Ask Jeeves has been rated No. 1 in user satisfaction when compared with other search and navigation sites, including Alta Vista, Excite, GoTo, HotBot, and Yahoo!. This is according to an independent survey conducted quarterly by the NPD Group among approximately 30,000 Internet users. And Ask Jeeves users have grown from several hundred thousand a month to over 3.1 million in June, according to Media Metrix.

Rob Wrubel
President & CEO
Ask Jeeves
Emeryville, Calif.

CALIFORNIA TRIAL LAWYERS ARE ON THE WARPATH

Regarding "Suddenly, trial lawyers are on the defensive" (Washington Outlook, July 19): In California, trial lawyers would be much better characterized as on the offensive. While the Association of Trial Lawyers of America contributed \$2.4 million to federal races in the 1997-1998 election cycle, during the same period the California trial lawyers spent more than \$10 million on statewide and legislative races—many of them successful.

It is no coincidence that the personal-injury lawyers are now pushing their most aggressive legislative agenda in California in 16 years—most of which is designed to increase self-serving fee-based lawsuits against large and small businesses in the state.

John H. Sullivan
President
Civil Justice Association of California
Sacramento

WE HAVE ENTREPRENEURS TO THANK FOR THE NEW ECONOMY

"The New Economy finally gets some respect" (Editorials, July 26) gets it half right. BUSINESS WEEK falls into the trap of attributing the wonders of the New Economy solely to information technology and the Internet. While technology has certainly played a role, your editorial neglects the critical effect of the new wave of entrepreneurs who have transformed the way we work and live.

While most Americans consider Bill Gates to be the quintessential entrepreneur, the reality is just as much Main Street as Silicon Valley (or Redmond, Wash.). Industries as diverse as energy, clothing, and coffee shops have

CORRECTIONS & CLARIFICATIONS

"Women shun the dismal science" (Economic Trends, Aug. 2) incorrectly stated that the percentage of economics PhDs earned by women declined sharply from 1993 to 1997. In fact, what fell was the proportion of jobs in PhD-granting economics departments going to newly graduated female PhDs.

all been transformed by the emergence of new innovators—for example, Enron, Gap, and Starbucks. In fact, more than 16 million Americans—roughly 9% of the adult population—are now trying to start their own business.

The New Economy is actually the entrepreneurial economy. As the pace of change in global markets and technology has accelerated, entrepreneurs have seized the opportunities created by that change. Without them and the companies they have created, the great wealth potential of new opportunities would have been unrealized entirely, or seized by other nations.

Douglas Mellinger
Chairman
National Commission
on Entrepreneurship
Washington

WHY THIS DISABILITIES LAW SHOULD NOT BE REPEALED

"Are we hurting or helping the disabled?" (Economic Viewpoint, Aug. 2) illustrates the widespread ignorance that surrounds the Americans with Disabilities Act. The best remedy for disability discrimination is not to repeal the ADA, but to provide accurate information.

Contrary to Gary S. Becker's implication, having a disability does not translate to a lack of productivity. Those of us with disabilities tend to be among America's most motivated and accomplished workers, so grateful are we for the opportunity to prove ourselves. As natural problem-solvers, we often approach routine tasks in creative ways. Job accommodations, when necessary, enable us to perform on a par with nondisabled co-workers.

Becker asserts that the ADA has "widened the concept of disability to absurd extremes." In fact, the opposite may be true. The Supreme Court's recent rulings in a trio of employment cases narrowed the definition of disability, which now appears to exclude millions of individuals that Congress

clearly intended to cover—myself included, as a person with epilepsy. Though I take daily medication to control seizures, the Court's analysis might permit employers to deny me—on a solely prejudicial basis—jobs for which I am fully qualified.

The vast majority of the federal lawsuits to which Becker erroneously refers as "the principal disabilities gated under the ADA" are quickly dismissed by judges around the country. Furthermore, the American Bar Association reports that employers prevail in 94% of final court decisions.

Finally, Becker cites a 1998 Massachusetts Institute of Technology study that indicated a drop in the employment of people with disabilities since the Americans with Disabilities Act was enacted. This study compared different Census survey questions from one year to the next, producing highly questionable results.

Tony
Chairman
President's Committee
on Employment of People
with Disabilities
Washington

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BY STEPHEN H. WILDSTROM

UNTANGLE THESE WEB SITES, PLEASE

Tasks like booking travel or getting info are still much harder than they have to be

I spend a good part of every day perusing corporate Web sites, and I am constantly struck by how bad many of them are at their mission of communicating with customers or selling products. More than anything else, I think this is a reminder that for all the buzz and excitement, the Web remains a painfully immature medium that people are only beginning to understand.

Consider airlines on the Web. The carriers would love to increase the minuscule share of tickets—less than 5% of the total—now sold online. I should be the perfect customer, since I like to pick flights from a list on the screen in front of me rather than from information given by an agent over the phone.

The Web sites are frustrating, though. Granted, the complexity of flight schedules and fares is a problem for all online ticketing. But in a common mistake of corporate Web sites, some airlines make the problem worse by forcing me to drill down through pages and pages before I can do anything useful. For example, before you can request any information on schedules from United Airlines (www.ual.com), you have to go through four slow-loading and very uninformative pages. (That's assuming you're already a registered user. If not, it's worse.) At least online travel agents

Expedia (expedia.msn.com) and Travelocity (www.travelocity.com) let you start choosing flights on their home pages.

Hertz is another company that makes online transactions a lot harder than they have to be. I rent a lot of cars and almost always use Hertz No.1 Club Gold for its convenience. Reserving a car

which customer names and car location numbers appear at No.1 Club airport facilities. Unfortunately, each letter in the display is a graphic, and the whole thing takes what seems like forever to load. Pleasant as it is to see my name up in lights on the Web page, I would rather get through the reservation process faster.

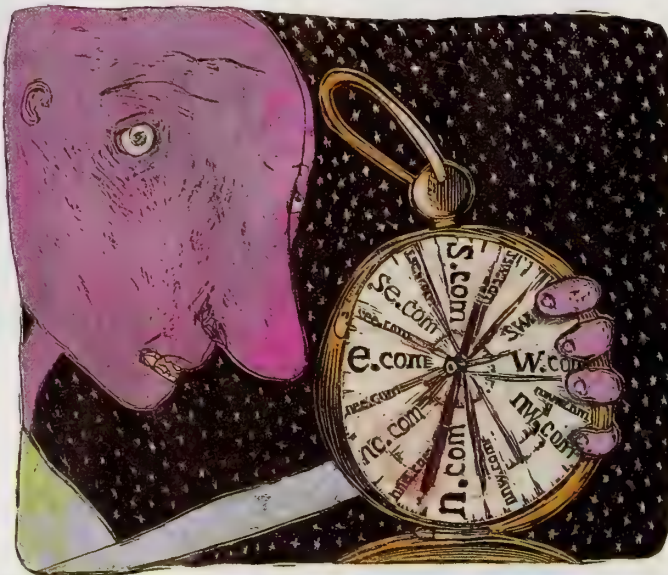
DRILLING DOWN. Things aren't helped by a complex form that I rarely succeed in filling out correctly on the first try. It requests redundant information—for example, both a flight number and an expected time of arrival. And it fails to use information that's already in my saved profile as a default for

culties that plague the medium. For one thing, don't think any company has a vast and sprawling presence, such as IBM or Hewlett-Packard, has found a way to make navigating its site or finding material simple. Nor have they improved their sites, which often are the result of independent efforts by separate units, the feel of an integrated whole.

That said, Microsoft has some problems of its own. Microsoft's site is a Web gurus call vertiginous; usually have to drill down through several layers of pages to find what you're looking for. To make matters worse, Microsoft pages load slowly, even on a fast connection. The result is a frustrating experience.

Huge sites require powerful search tools, and here Microsoft falls short. Search results often make it impossible to find product information or locate a download. The problem is worst in the online help area, which is the one most consumers can't get past. Microsoft technical help screens down from the page, I finally was able to enter a question about the latest Windows crash. The fatal exception error was asked. The answer to my query results cannot be displayed."

I picked these pages not because they are the worst, but because they know their shortcomings well. The lessons for companies of any size are obvious, though. It's always easy to implement changes you want to steer customers to your Web site, make buying at least as easy as alternatives. And if you want to delight customers, put yourself in their shoes. A lot of time looking for information on your site makes sure the online experience is delightful—or at least helpful.



RULES FOR BUSINESS WEB SITES

DO spend time on your own site—at the same access speed your customers use.

DO provide search tools that are first-rate.

DON'T make visitors burrow through multiple pages to find what they came for.

DON'T frustrate visitors with slow-to-load graphics.

over the phone typically takes just a few minutes.

The Web version (www.hertz.com) takes much longer, mostly because of some poor design choices. Someone at Hertz had the cute idea to adorn the reservation pages with a banner that mimics the lighted signboards on

preferences such as car type. The result is that it is generally quicker and easier to reserve by phone. I'm sure it's more expensive for Hertz to have reservation agents take the calls.

Microsoft's main Web site (www.microsoft.com) illustrates some other basic diffi-

CORRUPTION OF AMERICAN POLITICS
 Went Wrong and Why
 Elizabeth Drew
 June • 278pp • \$21.95

WHY WASHINGTON WON'T LEAN UP ITS ACT

a cliché that Washington has become a corrosive, mean-spirited place in the 25 years since Watergate. Political discourse has degraded to petty name-calling. The quality of elected officials has declined. Politicians consider success at the polls more important than solving national problems.

Elizabeth Drew's desire to put meat on the bones of hackneyed ideas is what drove her to write her latest book, *The Corruption of American Politics*. Most Americans are perfectly willing to accept her thesis, they probably know why they believe it. She explains the reasons.

Drew, the former longtime Washington correspondent for *The New Yorker*, says the fundamental problem is the lack of campaign finance reform. That's not a new insight. But only a handful of people in the U.S. really understand how the system works. Drew is one of them. She outlines how the money is raised (it borders on extortion), why it continues to give (they're afraid to lose access when they need it), and how the newfangled methods lawyers use to raise bundles of cash.

In Illinois Republican J. Dennis Hastert became House Speaker in January. For example, he offered lobbyists a seat for an audience with him—in exchange for a contribution to his Leadership Political Action Committee. Now, Hastert strengthens his hold over House Republicans by doling out the PAC money needed to get reelected.

Another example involves the way lobbying firms have morphed. They excel at winning over grassroots support for an issue, while others are at stimulating the "grass tops," opinion makers who are somewhat paid to support causes. But some of its contract to do nothing but the money tree. They advise

politicians on how to concoct a controversial issue, then help them cash in when interest groups reflexively respond by making donations to open doors on Capitol Hill. Cynical lobbyists call this approach "Astroturf."

Drew doesn't hide her disdain for one of the most powerful lobbying groups, the National Association of Broadcasters, whose members have the power to stimulate grassroots activity through their programming. Because of that, and lawmakers' need for coverage and endorsements from local TV stations, incumbents are loath to cross the trade group. That's one big reason why campaign finance reform goes nowhere, says Drew. The industry opposes free airtime for campaign ads: Pols spent \$532 million on TV ads in the '98 midterm elections, shattering the record of \$356 million set in the '96 Presidential contest.

Drew laments that even when the campaign finance system's serious flaws are exposed, little is done. This was especially so after the '96 race, when Clinton denigrated his office by selling one of the country's most sought-after assets—the President's time. Here Drew excels, explaining in detail how the Clintonites escaped serious investigation and how their backers avoided criminal charges.

One way Clinton did this was by lampooning congressional inquiries as "partisan witch-hunts." Drew quotes former White House aide Don Goldberg on the "Damage Control 101" strategy: "If you don't have much to go on, you decry the partisanship....[News] stories will begin, 'In a hearing mired in partisanship,' and then they get to the subject of the hearing, and you've won."

The White House and its spin doctors tested this strategy in 1995 to fend off criticism of the Waco siege that ended in the death of 86 Branch Davidian cult members. They employed it in the summer of '97 to blunt the election scandal hearings chaired by Senator Fred Thompson (R-Tenn.). And they perfected it during Clinton's '98 impeachment hearings and trial.

Fixing the corrupt campaign finance system won't be easy, and Drew demonstrates why. For example, Democrats aren't as pro-reform as they sound, Clinton especially. She unveils the hypocrisy behind Clinton's repeated calls for reform that followed his breaking every rule in the book to win in 1996. And many Republicans aren't as anti-reform as you'd think. A majority of both houses, in fact, favors abolishing soft money, the unregulated donations from corporate heads, wealthy individuals, and labor unions that are supposed to go to political parties but inevitably end up

supporting candidates. But because of the 60-vote filibuster rule in the Senate, a minority can always block campaign-finance reform.

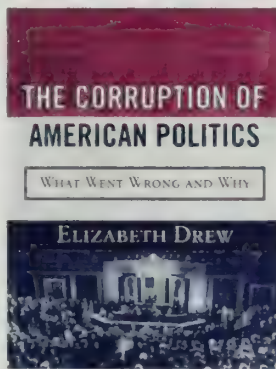
Drew isn't a great writer, but she is a good documentarian, especially of the floor battles over reform in the last Congress. Possibly the book's greatest accomplishment is her revelation of how House Majority Leader Tom DeLay

(R-Tex.) and Senator Mitch McConnell (R-Ky.), head of the National Republican Senatorial Committee, connived and caajoled to keep campaign finance measures bottled up. They'll be at it again in September, when reform measures are due to come up—again.

The history of great reforms—women's suffrage, civil rights, minimum wage—is that they take a long time and aren't for the weak-hearted. So Drew remains optimistic. What can ordinary people do? The solution, she says, lies in voter revulsion. But when voters dismiss Washington as irrelevant and refuse to vote out of disgust, they forfeit the right to complain. Drew's message: Hold your nose, but vote.

BY PAULA DWYER

Dwyer has covered the politics of campaign finance for a decade.



REW REVEALS THE DIRTY DETAILS OF CAMPAIGN FINANCE—AND UNMASKS REFORM'S ENEMIES

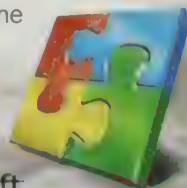


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Books

THE CLOCK OF THE LONG NOW
Time and Responsibility
By Stewart Brand
Basic Books • 190pp • \$22

SLOW FORWARD

As the clock counts down to the turn of the millennium, it's easy to obsess about time. But few folks ponder it in the same way as Stewart Brand, the Sausalito (Calif.) inventor, writer, and environmental pundit who in the late 1960s founded the *Whole Earth Catalog*. Today, Brand and a few future-thinking buddies are trying to build the world's largest and slowest mechanical clock, which they hope will loom in the American desert for the next 10,000 years as a testament to the continuity of time. It might tick once a year, bong once a century, and bring out the cuckoo only once every 1,000 years. Brand's group even wants a smaller urban version and a massive library of civilization's collective knowledge. The goal? To get humans to think beyond the priorities of their own lives, explains Brand in his new book, *The Clock of the Long Now*.

It's a noble experiment, and Brand's volume concentrates as much on the

philosophy behind cultivating a long view as on the mechanics of the project. That's one of the problems, and pleasures, of this book. Brand dishes up a series of eclectic and tiny essays—some only three pages long—that explore ideas related to time. One minute, you're mourning the horror of libraries

burned by Adolph Hitler or Chinese Emperor Shih Huang-ti in the third century B.C. The next, you're examining the innards of prototype clocks. The result is that following his argument sometimes slows to a long now.

But the inspired ideas behind this project will probably be enough to keep you hooked. Brand is concerned that humankind is developing a "pathologically short attention span" that can't conceive of—never mind care about—the far-off future. This, he says, is due to several factors, including the acceleration of technology, the short-horizon perspective of market-driven economics, the next-election fixation of democracies, and the distractions of personal

multitasking. Meanwhile, humans are rapidly exhausting the world's resources.

Then there's the dilemma of building a massive machine that not only takes exquisite time but can also last 10,000 years—or at least be simple enough to fix every so often. In this, the author has some high-powered help. His

of several big names on the Long Now Foundation. Its roster also includes percomputer pioneer Larry Hillis, who conceived the clock, and British new-wave musician Brian Eno, who came up with the name. Tech giant Esther Dyson and Long Now founder Mitchell Kapor are also in the circle.

In his proposal for the clock, Hillis compares its planned size with Stonehenge. The result, of course, is Stonehenge

future generations staring in at a hump of rusted-out metal, even if the clock is never built. It proves that simply raising the issue is a potent tool for thinking differently about time.

BY DIANE



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The future is growing™

BY JEFFREY E. GARTEN

ETHICS BE DAMNED, LET'S MERGE



BEWARE:
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firms want
to add legal
advice to their
services. That
would raise
enormous
conflicts of
interest

Jeffrey E. Garten is dean of the Yale School of Management. A former investment banker, he was Under Secretary of Commerce for International Trade in the first Clinton Administration (jeffrey.garten@yale.edu).

Beware the growth of professional-services conglomerates such as Arthur Andersen & Co. or Ernst & Young that encompass accounting, consulting, and, if they have their way, legal advice. Unlike the growth of most other megacorporations, this trend could undermine two crucial underpinnings of our market economy: independent auditing and sound legal advice.

The tendency for various service professions to band together gained momentum earlier in August when a committee of the American Bar Assn. presented to its membership a recommendation to allow lawyers and nonlawyers to work in the same company and split fees. A formal vote of the ABA is expected to take place next year. In the past, such activity has been prohibited by the ABA, regional bars, and various state laws. But with soaring demand for sophisticated financial and retirement planning, many people want one-stop shopping for both legal and accounting advice. And a good number of multinational companies want the convenience of relying on a few service firms to handle all their global needs.

The most important reason why law firms will be merging their businesses with other service companies, however, is the voracious appetite of the big accounting firms. During this decade, the Big Eight have become just five: PricewaterhouseCoopers, KPMG Peat Marwick, Arthur Andersen, Ernst & Young, and Deloitte Touche Tohmatsu. All are obsessed with leveraging their accounting relationships to help clients do other things—plan their corporate strategies, build and manage their information-technology systems, and now, solve clients' legal problems.

TEMPTATIONS ABOUND. What's wrong with this picture? The potential for conflicts of interest is enormous. As the Securities & Exchange Commission recently said, the auditing profession must be more than just another business selling a product or service. It has an obligation to not only disclose financial information to investors but also to put investors' interest above those of the auditors' clients or even their own employer. On the other hand, lawyers are confidential advisers and advocates, with primary allegiance to the client.

Would it be ethical for the legal division of one of the Big Five to render an opinion on the auditing performance of that firm? If the lawyers and accounting partners are being

paid from the same corporate profit pool, one not be tempted to skew advice that requires further services from its sister firm? Suppose a multiservice Big Five firm is hired by a client on management strategy. If the firm has faith, could it conduct an independent audit of that same client's accounts, possibly casting doubt on the strategy itself?

The latest case in point is the deal between KPMG and Cisco Systems Inc. as the firms' announced intention to take their management-consulting venture public. This raises a host of ethical and legal issues: How audits a company that is also its shareholder?

Then there is the question of business priorities. Management consulting and legal services produce fatter margins than accounting. If all-important auditing business is likely to get subordinated.

GLOBAL SCRAMBLE. It's not as if the new service businesses don't have enough work now. The Big Five are already scrambling to build global networks in their traditional businesses, and they would do well to focus on reversing the serious deterioration in quality of earnings statements. And as the firms get bigger, and as some merge with foreign firms, as Rogers & Wells LLP recently did with Britain's Clifford Chance, there is no doubt that they will have difficulty managing themselves.

It is increasingly challenging to effectively manage any conglomerate these days. A firm such as PricewaterhouseCoopers, with 155,000 employees in 150 countries, is faced with the problems of coordinating disparate businesses, implementing new strategies, maintaining quality control, and melding different professional cultures and compensation systems.

Some powerful groups, such as the New York State Bar Assn., are objecting to the marriage of law and auditing because of conflicts of interest. But there is an enormous amount of momentum for it, and if such combinations are permitted, as they are in other countries, they will spawn sprawling, unmanageable and internally conflicted empires that will ultimately disappoint customers and raise questions, if not the intervention, of regulators when such problems occur in the professions that are central to the development of market rules and full disclosure of information, they will undermine America's highly successful brand of capitalism.

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BY MICHAEL MANDEL

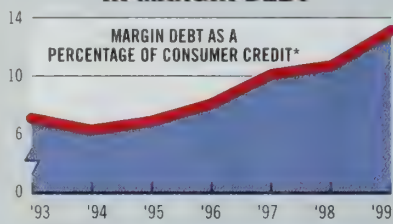
A TIME BOMB FOR BORROWERS?

Private debt and its risks are rising

Are U.S. corporations and consumers taking on too much debt? The degree of leverage in an economy is perhaps the key measure of its exposure to financial problems.

By some yardsticks, there has been a dramatic acceleration in the amount of private borrowing. While the federal

THE SUDDEN JUMP IN MARGIN DEBT



▲ PERCENT

*DEBT IN MARGIN ACCOUNTS AT NYSE MEMBER FIRMS

DATA: FEDERAL RESERVE BOARD, NEW YORK STOCK EXCHANGE

government has started paying down its debt, debt held by nonfinancial corporations rose at an annual rate of 10.7% in the first quarter. That's on top of a 10% rise in 1998, the highest figures in a decade. Moreover, the amount of short-term commercial paper issued by domestic nonfinancial corporations is up by a staggering 20% over a year earlier.

So far, bigger debt has not translated into larger interest payments. But with rates on the rise, companies—especially those that depend heavily on short-run loans—will see profits start to erode.

Even more worrisome is the buildup of household debt. To be sure, the rate of increase in consumer credit such as credit-card debt and auto loans slowed in the second quarter, to a 4.5% rate, down from 9.7% in the first quarter. But the amount of margin debt—borrowing against stocks—has exploded in recent months and is not included in the consumer-credit data. In the second quarter alone, the amount of margin debt at New York Stock Exchange member firms rose by some \$20 billion, vs. a \$15 billion hike in consumer credit. Indeed, margin debt has doubled since 1996, pushing the ratio of margin debt to consumer borrowing to its highest level in years.

Part of that increase, of course, re-

flects the enormous rise of the stock market. Investors can borrow up to 50% of the value of their stocks, so as prices rise, they can borrow more. But if stock prices fall sharply, they will be forced to pay back some of the loans or sell the stocks—and the hit to the economy in either case could be quite large.

MORE FUEL FOR GLOBAL GROWTH

Fiscal policy is getting looser

Don't overlook the importance of global fiscal policy in the years ahead, advises London-based economist John Llewellyn of Lehman Brothers Inc. It's understandable that financial markets are obsessed with monetary policy and interest rates. But while fiscal policy is changed less frequently and has a more diffuse effect on economic activity, its influence can be considerable.

Recent history illustrates the point. After several years of fiscal stimulus, concern about rising public debt led Japan in 1997 to reverse course and shift towards a policy of fiscal restraint. Combined with the gathering Asian crisis, that unfortunate move played a key role in prolonging Japan's recession.

Meanwhile, starting in 1993, Europe began progressively tightening its fiscal policy, reaching a crescendo of restraint equal to a huge 1.7% of gross domestic product in 1997 as the race to Maastricht accelerated. Although monetary policy was eased over the same period, the sudden massive tightening in '97 slowed European growth that year to a crawl.

U.S. fiscal policy was also restrictive from 1993 through 1998. However, its course was more steady than in Japan or Europe, and an adept Federal Reserve was able to use monetary policy to keep the level of economic activity close to where the Board wanted it.

The upshot of these individual trends, notes Llewellyn, was a global swing toward restriction of well over 1% of GDP in 1997. Thus, it's no surprise that 1998 "was destined globally to be a year of weak economic activity, weak inflation, trouble for exposed economies, and yet lower official interest rates." But 1998 was also a year of much more modest fiscal restraint, and the latest economic outlook from the Office for Economic Cooperation & Development (OECD) suggests that global fiscal policy will be broadly neutral this year and next.

In other words, fiscal policy won't be constraining the growth of the world's

biggest economies in the years ahead. And monetary policymakers won't have to worry about offsetting its restraining influence.

By Gene...

BIG PLAYERS OFFER BETTER

For workers, company size matters

Big businesses have historically paid higher average wages than smaller ones. This is due, in part, to the disproportionate number of low-paying, low-skill retail jobs found in restaurants, gas stations, and similar mom-and-pop operations. But economic research has consistently found that even after adjusting for industry and skills, workers get paid more by bigger employers.

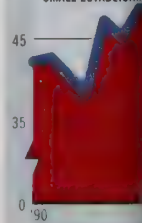
Now, the benefits of bigger employers are increasing. Based on data from the Bureau of Labor Statistics, the wage premium of working at a large establishment has risen in the past decade (chart). In the early part of the '90s, big outfits paid about 40% more than small ones. That premium has risen to just under 50%. And the gap continues to widen. From March, 1998, to March, 1999, big operations had a wage increase of 3.3%, compared with only 2.2% for small ones. (For these purposes, a small workplace has fewer than 100 workers, while a large one has more than 100.)

Why is this? Large companies are more likely to hire high-skilled workers, such as engineers, programmers, managers, and executives. Still, even among white-collar workers, the pay gap has widened sharply. In 1993, white-collar workers earned 39% more at big companies. That rose to 47% in 1995 and 47% by 1999.

An alternative explanation is that workers at big outfits are reaping the gains of their employers' superior performance. So far in the '90s, larger companies seem to be better able to utilize the latest technology advances while consolidating their control over markets. As long as large companies continue to outstrip smaller ones in terms of profits, the gains are to trickle down to workers, too.

THE RISING BURN OF BIGNESS

DIFFERENCE BETWEEN WAGES AT LARGE AND SMALL ESTABLISHMENTS



▲ PERCENT

*SMALL: FEWER THAN 100

LARGE: MORE THAN 500

DATA: BUREAU OF LABOR STATISTICS

\$

pluribus

a plu-ri-bus u-num [Latin]

unum

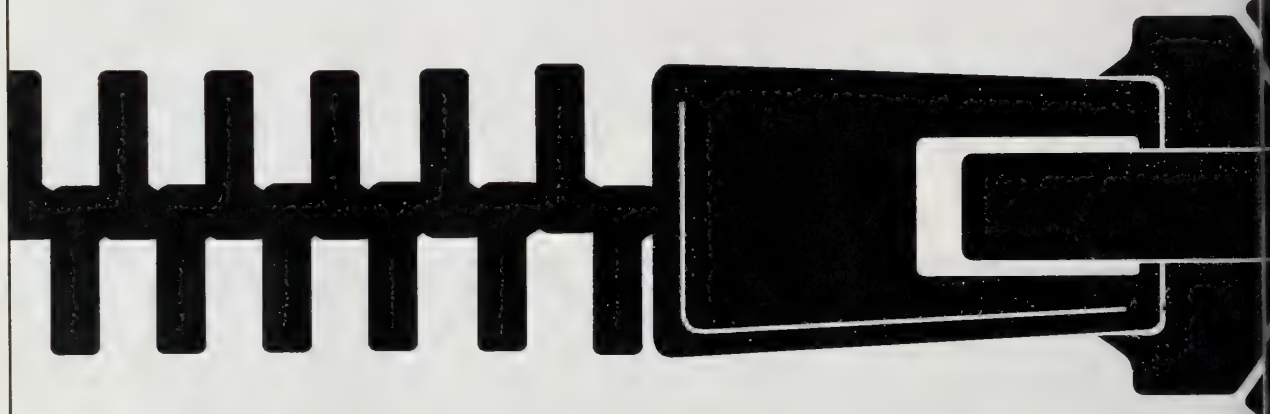
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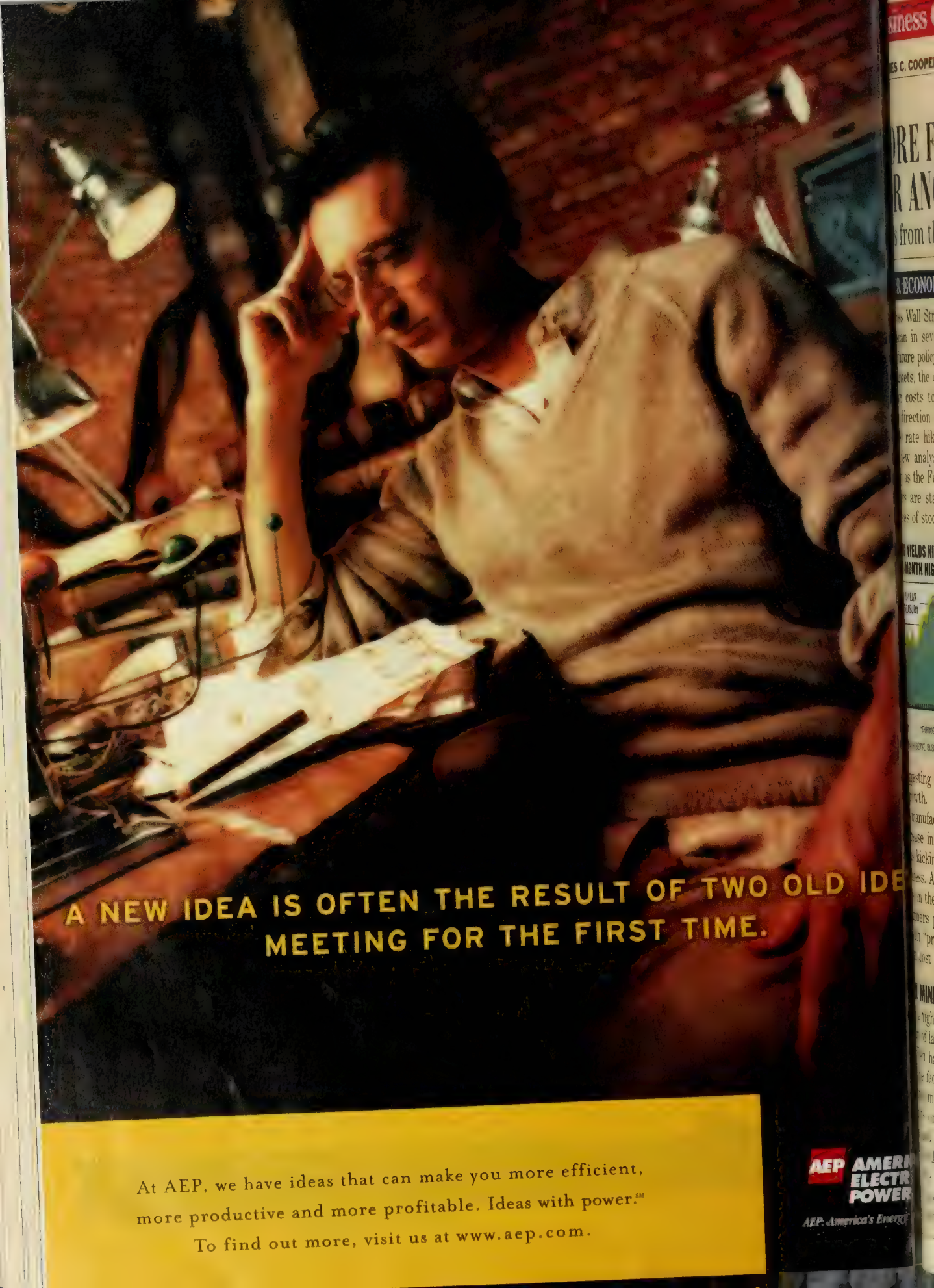
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MORE FUEL FOR ANOTHER FED HIKE

As from the labor front supports further tightening

U.S. ECONOMY

Once again, the Federal Reserve is casting its long shadow across Wall Street. Ever since Fed Chairman Alan Greenspan in several speeches this summer clearly linked future policy decisions to the behavior of the labor markets, the data on everything from job growth to productivity have moved in the direction for anyone hoping that the Fed's 30 rate hike was a one-shot deal. After that few analysts expected another rate increase as the Fed's upcoming Aug. 24 meeting. Now, markets are starting to build that possibility into prices of stocks and bonds (chart).

30-YEAR TREASURY YIELDS HIT A 1-MONTH HIGH



30-YEAR TREASURY YIELDS
*THROUGH AUG. 10
FEDERAL RESERVE, BUSINESS WEEK

suggesting that tight labor markets are pushing up growth.

Manufacturing payrolls posted their first material increase in 1½ years, implying that the industrial sector is kicking into a higher gear after last year's slump. A manufacturing upturn will place added pressure on the economy's already-thin labor resources. Numbers play squarely into Greenspan's July 22 speech "promptly and forcefully" if new data suggest that cost and price increases will be picking up.

ON MIND

that the June 30 rate increase was not a tightening move as it was an attempt to take part of last fall's "emergency injection of liquidity," the Fed has called those three quarter-point rate hikes the face of global financial market turmoil. The employment report provides further evidence that markets ended up giving the economy too much credit and that a further policy adjustment may be required quickly.

First, the July job gain was far larger than the market or so that the markets had expected. Second, the gains were the broadest of the year. Some 59% of

the 356 industries that the Labor Dept. surveys added workers to their payrolls. Service industries posted a big 260,000 gain, led by retail trade, up 91,000, and by personnel-supply companies, up 41,000. Construction added 22,000 new employees.

But the biggest news on the job front came from manufacturers, which added 31,000 workers, after shedding 490,000 jobs during the previous 15 months. Also, the factory workweek increased by 12 minutes, to 41.9 hours, the longest in 1½ years. Taken together, those indicators imply that factory production in July posted a strong gain, continuing the acceleration in output growth that began earlier this year.

The two factors that were a drag on manufacturing output are now turning around: Foreign demand is picking up after a two-year slump, and inventories need to be rebuilt after last year's slower rate of stockpiling. Indeed, factory shipments are growing faster than inventories, and in June, the ratio of factory inventories to sales was the smallest on record. Meanwhile, domestic demand shows no sign of flagging.

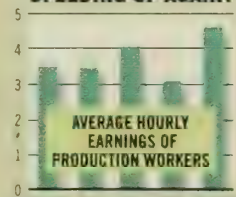
Perhaps the most worrisome news from the July job data—at least from the markets' perspective—was the jump in pay for production workers. The rise suggested that the sharp increase in labor costs in the second quarter did not abate at the start of the third quarter. Also, the increase was not just a one-month wonder. Pay in the past three months has risen at an annual rate of 4.6%, the fastest three-month pace in more than a year (chart). In addition, pay growth from a year ago appears to be picking up again, led by pay in manufacturing, after slowing during the past year.

TO BE SURE

some of the recent top-line data suggest less urgency for Fed action. For instance, the unemployment rate in July held at 4.3%, about where it has been for the past nine months. And annual trends show that unit labor costs remain tame and that productivity is still growing strongly, even though the latest quarterly data show that costs soared in the second quarter, while output per hour worked sagged.

In fact, prior to last quarter, the trends in wages and

IS WAGE GROWTH SPEEDING UP AGAIN?



AVERAGE HOURLY EARNINGS OF PRODUCTION WORKERS
▲ THREE-MONTH PERCENT CHANGE, ANNUAL RATE
DATA: LABOR DEPT. BUSINESS WEEK

productivity could not have been more soothing to inflation worrywarts. Not only was wage growth slowing, but at the same time, productivity growth was picking up. That's why the second-quarter slowdown in productivity, to an annual rate of 1.3%, after very strong gains averaging nearly 4% in the two previous quarters, raised a red flag. It brought to mind Greenspan's recent warning: "Should productivity fail to continue to accelerate and demand growth persist or strengthen, the economy could overheat."

THE DISAPPOINTING REPORT on productivity, though, raises the question: How could profit growth in the second quarter have been so robust if labor costs were out of control? The explanation lies in the yearly trend in the data. When smoothed out over time, productivity is growing quite powerfully. It advanced 2.9% in the past year, the highest clip in 6½ years (chart), holding the growth in unit labor costs to only 1.4%. However, productivity will have to stay that strong in order to prevent any pickup in wage growth from compelling companies to raise prices.

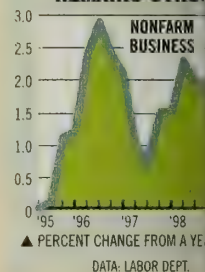
That's because the measure of compensation in the Labor Dept.'s productivity-and-costs report, which covers a broad range of wages, salaries, and benefits, including stock options, soared at a 5% annual rate, the largest increase in 1½ years, and growth from a year ago was 4.3%. If productivity slows, unit labor costs will

shoot up rapidly, placing pressure on companies at a time when demand is strong, when labor markets are tight, and when prices in the early stages of process are already starting to strengthen.

In fact, third-quarter productivity may not look any better than it did in the second. That's because hours worked rose sizably in both June and July, suggesting a large increase in work time in the third quarter. For example, if hours rise 3.5%, which is not unreasonable based on their July increase, then output would have to surge more than 6% for productivity to maintain its 2.9% annual growth trend. That's not impossible, but it is unlikely.

Of course, Wall Street doesn't always get it right. After the June 30 rate hike, the financial markets' collective wisdom concluded that the Fed was on hold for the rest of the year. This time, however, markets may be on to something. They are worried that the conditions for future rate hikes—as laid out by Greenspan himself—are falling into place. And what probability you had assigned to the likelihood of an Aug. 24 rate hike prior to the July job data, you raise those odds now.

THE PRODUCTIVITY REMAINS STRONG



FRANCE

CONSUMERS SHOW SOME JOIE DE VIVRE

Thanks to a more dynamic job market and rising buying power, consumers continue to set the pace for France's recovery. For the euro zone's second-largest economy, increased household spending should trigger a virtuous cycle: Stronger domestic demand will create more jobs and better income growth, leading to more spending.

For the year ended in the first quarter, real gross domestic product rose 2.3%, with consumer spending up 2.2%. In the second quarter, real retail sales advanced a solid 1.7%. Then in July, car buying hit a record high, suggesting that consumers are boosting their spending in this quarter as well.

The spending spree, though tame compared with the U.S. binge, is being fueled by improved job prospects. The French jobless rate slipped from 11.4% in May to 11.3% in June, equalling the six-year low hit in April. More than 290,000 new jobs were added in the year ended in the first quarter, led by hiring by high-tech and service companies. Job creation is the aim of a recent bill to cut the workweek from 39 hours to 35 hours in 2000.

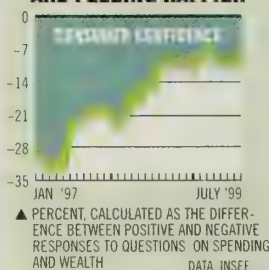
Whether the Socialist Party measure will expand payrolls, though, remains to be seen.

Meanwhile, extremely mild inflation also is helping consumers. In July, consumer prices were up only

0.4% from a year ago. Slowing inflation and modest wage gains mean that real household buying power may rise by 2.5% this year, forecasts the government's statistical agency, INSEE, on top of a strong 3.5% advance in 1998.

It's little wonder that consumers are more optimistic. The consumer confidence index rose 8 in July, near the record 7 in February (chart). (The index has never been positive since it began in 1987.) Consumer demand helped also lifted business confidence led to the recent improvement in industrial production and a surge in home building. For all of 1998, French consumer spending is projected to increase by about 2.3%. If so, household spending could increase by more than France's overall GDP for the first time in three years.

FRENCH CONSUMERS ARE FEELING HAPPIER



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THE ECONOMY

WILL TIGHTENING CHOK OFF GROWTH?

Even with rates ratcheting up, the answer seems to be no

The bond market is in tumult, drowning in a sea of new issues. That's forcing lenders to pay ever-higher rates to attract buyers. In the stock market, once high-flying Internet plays are spiraling back toward terra firma. The broad equity market rally is grinding to a halt, too. Meanwhile, the dollar—which once shamed the Euro—is off 7% since mid-July against its European counterpart. The greenback is slumping against other currencies as well, as foreign investors begin looking at the U.S. economy with a skeptical eye.

So why is Federal Reserve Chairman Alan Greenspan thinking about raising interest rates again on Aug. 24—a second hike in just two months? Perhaps it's because while Wall Street is frazzled, Main Street seems to be taking the first dose of higher interest rates in stride. Although market yields have been rising since the first of the year, a surprisingly large 310,000 new jobs were created in July, and the National Association of Purchasing Management Index stayed above 50 last month, a sign of continued growth.

BRISK MOVES. June factory orders were also 0.7% higher than May's. And on Aug. 11, the Federal Reserve's summary of regional economic conditions, colloquially known as the beige book, reported that manufacturing activity nationwide is expanding. In particular, the central bank noted output of industrial equipment and home-construction materials "has been expanding briskly... though there are scattered indications that

growth is being limited by shortages of raw materials and labor."

All that's precisely why many business execs and economists believe the U.S. expansion is simply too strong to be derailed by mere interest-rate creep. "So far, the economy has been pretty resilient in absorbing the Fed's actions," says General Motors Corp. President G. Richard Wagoner Jr. "I don't think [another] small rate move would be a disaster." What's more, even with

the recent hike, yields remain lower than they've been for most of the past 30 years. "This economy's got tremendous

\$4 billion. And marketing Vice President Philip M. Michel doesn't think a small rate jump will unhinge his net. "We shouldn't be all a-twitter," he says. "The marketplace has shown no perceptible response."

Still, some of the spending spree inevitably will slack off toward the end of the year as the rates make buying credit more dear. But that's okay, say the optimists. Thanks to a less volatile dollar, exports are very likely to make up the difference as U.S. goods and services become more affordable abroad. Exports also will be helped because the rest of the world economy is finally recovering from the Asian crisis, which began two years ago, and the summer's Russian default. Pro-

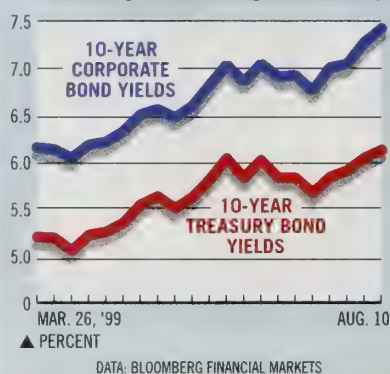
Richard B. B. chief U.S. economist at Morgan Stanley Dean Witter: "Exports will be leading areas of growth in the coming months."

All this should make the wished-for soft landing doable. But always, there are a few trouble spots. The most unsavory may be the jam that has

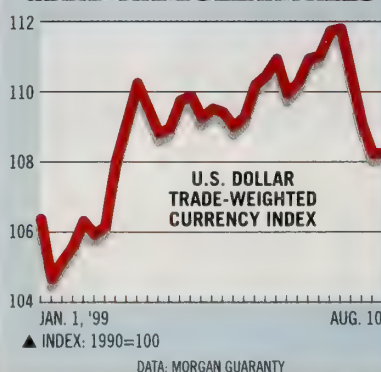
opened in the bond market. Companies with strong credit ratings are rushing to the market to avoid even higher rates. In July, according to Nomura Securities International Inc., issuance of corporate, mortgage-backed, and asset-backed securities was 40% higher year ago.

As a result, prices are plummeting and yields are skyrocketing. Ten-year corporate bond rates are up from 5.71% last December, to a

RATES TREND UPWARD...

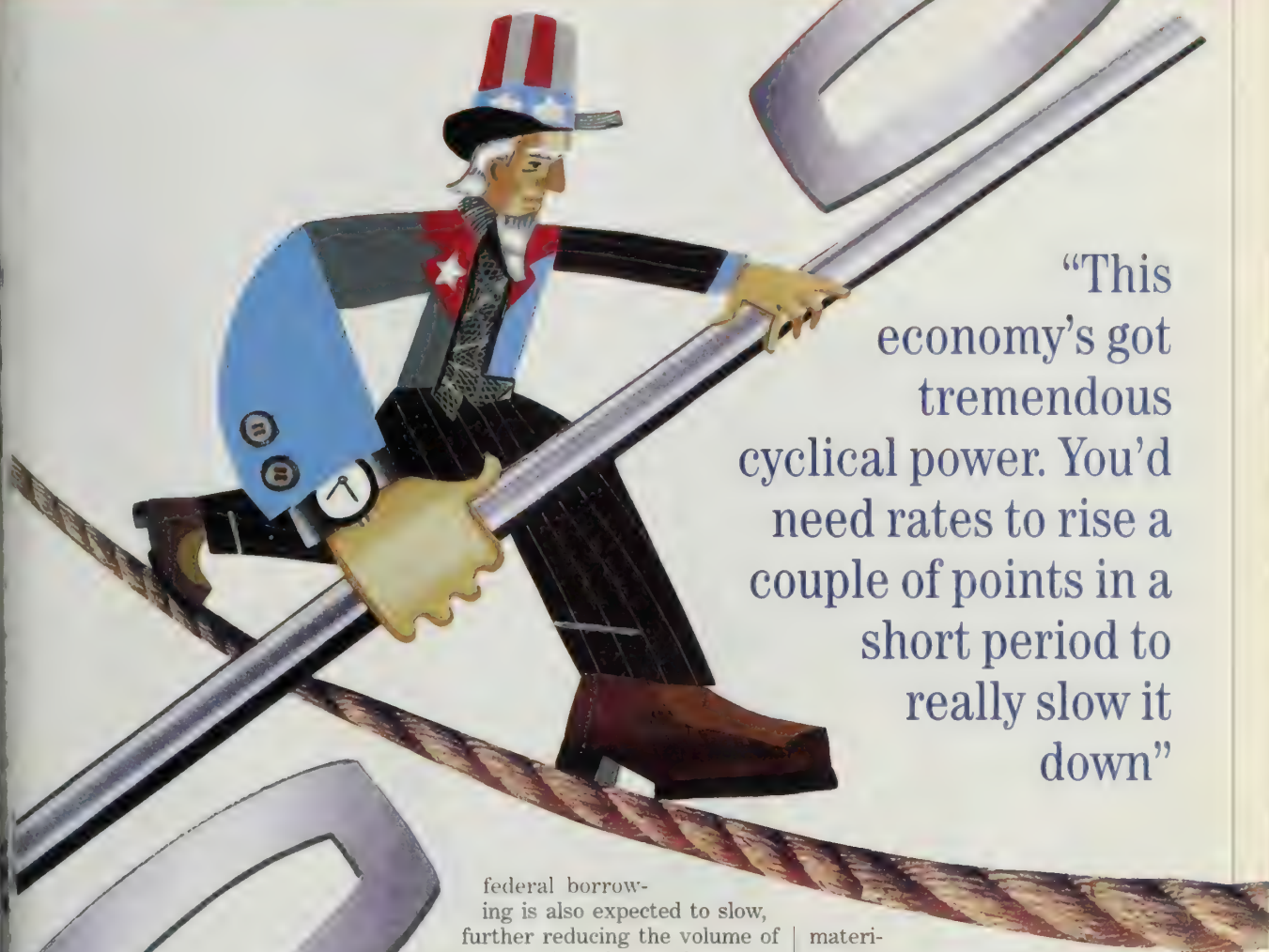


...AND THE DOLLAR FALLS



cyclical power," says Conference Board chief economist Gail Ffosler. "You'd need rates to rise a couple of [percentage points] in a short period of time to really slow it down."

Look at consumer and corporate spending. This year, families have been increasing spending at a healthy average annual rate of more than 5%. And capital investment was 15.3% higher in the second quarter than the first. Just ask some companies about whether they're ready to dial back on production. Business-jet maker Cessna Aircraft Co., for example, has a record order backlog of



"This economy's got tremendous cyclical power. You'd need rates to rise a couple of points in a short period to really slow it down"

7.4%.

Ten-year treasuries have spiked from 4.59%

months ago to 6.1%.

les the prospect of another rate ar of the Y2K computer glitch is the glut. CFOs want to be sure ve cash on hand at year-end to a liquidity crunch. "People are getting spooked," says J. Alan onomist at Stratevest Group, a ton (Vt.) money-management

good news: This rush to market ash out within a few months, to hold future yields in check. omas F. Carpenter, chief econo- ASB Capital Management Inc., a gton money manager: "There's a at most, if not all, of the corpo- endar will be placed by the end hird quarter." At the same time,

federal borrow- ing is also expected to slow, further reducing the volume of bonds hitting the market—and helping to drive rates down. The Treasury Dept. estimates it will trim publicly held debt by \$87 billion through Sept. 30.

ROBUST PACE. In the real economy, housing may face some weakness (page 41). With mortgage rates up more than 1.5 points since their low of 6.49% in October, 1998, refinancings are stalling. They were off by 63% during the week of Aug. 6, compared with a year before, according to the Mortgage Bankers Assn. "Refinancing is dead," says Barry Habib, president of Certified Mortgage Associates Inc., a Marlboro (N.J.) mortgage banker.

So far, the pace of home sales remains robust at an annual rate of 930,000. And mortgage applications for home purchases during the week of Aug. 6 were actually up by 14.5% over the same period a year ago.

Any hit to housing may be less intense than in the past, in part because of the huge pent-up demand for home improvements. Says Glen H. Hiner, CEO of Owens Corning, the Toledo (Ohio) maker of insulation, siding, and roofing

materi- als: "If new housing slows, there's a remodeling market just waiting for us."

Still, losing the ability to slash monthly mortgage payments by refinancing will take cash out of consumers' pockets. So, too, would a stock market slump. The S&P index is off 8.2% from its July 16 record high, in anticipation of Greenspan's next move. Already, many foreign investors have bailed out of U.S. equities markets, both because of the market dip and worries about the sagging dollar. Between January and May, their net purchases of U.S. stocks fell by 12% from the same period last year. "The worry at the back of the minds of international investors is the slowing of U.S. growth," says Julian Callow, European economist with Dresdner Kleinwort Benson in London.

Higher yields here are also helping drive down the dollar. "In a rising interest rate cycle, Europe's appetite for U.S. bonds will recede," says Avinash Persaud, global head of research at State Street Bank in London. He estimates that overseas investors would have to buy \$400 billion in U.S. assets

over the next year to keep the dollar stable—double what was purchased over the last year.

Auto sales—another big rate-dependent piece of the economy—are holding up well, for now. Because the refi and stock markets had been so hot earlier in the year, car and light truck sales for 1999 could still hit a record 16.5 million. W. Van Bussmann, corporate econ-

omist for DaimlerChrysler Corp., says it takes a full year for a jump in rates to work through to autos. He figures another quarter-point hike by the Fed will drive down sales by 200,000 next year. "The solar system's still intact," Bussmann says, "But the stars aren't aligned quite as well."

Greenspan, the economy's reigning chief astronomer, thinks his carefully

modulated approach eventually will induce a slowdown in the economy. So far, the Fed's efforts to raise rates have failed to slow the economy much, though they've created ripples on Wall Street. Reining in Wall Street may be far tougher than Chief ever imagined.

By Howard Gleckman and Laura Cohn in Washington

SUMMERS ON THE STATE OF THE ECONOMY

Higher interest rates are rippling through the economy. But in his first extended interview since taking over as Treasury Secretary, Lawrence H. Summers insists that the U.S. expansion will stay on track. On Aug. 9, the Treasury chief talked to *BUSINESS WEEK*'s Howard Gleckman and Laura Cohn and spelled out his views on rising interest rates, tax cuts, and the dollar.

Q: How nervous should we be about rising interest rates?

A: Long-term rates are substantially lower than they were in '93. That's a tribute to our fiscal success and the fact that this is an investment-led expansion. Our focus should be on fundamentals, not on monthly market movements.

Q: What about growing bond spreads and rising mortgage rates?

A: Widening corporate spreads reflect economic strength and [many new bond issues]. They're a sign of borrowing for investments rather than a deterrent to investment. Changing mortgage rates reflect increased volatility of interest rates.

Q: How worried are you about overheated real estate and financial markets?

A: Complacency is always a risk. It leads to excessive borrowing and excessive investment. But I believe the momentum of this expansion should continue.

Q: Why shouldn't the bulk of the non-Social Security surplus go to tax relief?

A: The government is in debt. That means the citizens of the U.S. are in debt. For the vast majority of American families, debt paydown is a large effective tax cut because of the



"Debt paydown is a larger effective tax cut because of the savings that come from lower interest rates"

LARRY SUMMERS

savings that come from lower interest rates.

Q: Would it be a catastrophe if talks on a tax-and-budget deal fall through?

A: We have a historic opportunity to set a framework for [future] budget surpluses. It would be too bad if we weren't able to take advantage of that. But it would be much better to pay down debt this year than it would be to lock the country into a huge tax cut that would put at risk the economic expansion.

Q: Should the U.S. intervene again in foreign-exchange markets?

A: I would just reiterate our policy,

which has been constant: The strong dollar is very much in the interest of the U.S. because of what it means for inflation, capital costs, and the dollar's role in the international system.

Q: Has Tokyo turned the corner on fundamental reform?

A: There are signs of improvement, but it's too early to reach conclusions. The focus needs to be on achieving domestic, demand-led growth and structural reforms to repair the financial system. We've seen progress, but there's a great deal more to be done.

Q: How bad are things in Russia?

A: Some of the highest hopes were too optimistic. The U.S. will continue to support [reforms]. But it is crucial that our support be disciplined. It may be that we will have to await the Russian election before a sustained program of economic reform can be put in place.

Q: Would devaluation in China be much of a problem as a year ago?

A: China faces profound challenges to structural reform. [But it] possesses very substantial reserves, has run a trade surplus, and still maintains a variety of controls on capital flows. The situation in China is very different than [elsewhere] in Asia.

Q: What about the rest of Asia?

A: It's encouraging that those countries that have been the most successful in meeting their International Monetary Fund commitments—Korea, Thailand, and the Philippines—have seen the greatest return of capital. Others—Indonesia, Brazil, and Russia—that have been less successful carrying through on their commitments have [been less fortunat



ING

TIL HOUSING BENDS, NEITHER L THE ECONOMY

np due to higher rates would have a ripple effect

a year, Carla Cerkeski and fi-
cé Bill Braley had been contem-
ing a bigger house. In July, they
tion. Three days after hitting
ket, their old home was snapped
\$150,000—some \$10,000 above
value. By early August, the cou-
unpacking in their new \$178,000
the Dallas suburb of Plano. “By
quickly,” says Cerkeski, a 50-
d insurance underwriter, “we
in a 7.5% fixed [mortgage] rate
interest rates rise even further.”
ederal Reserve Chairman Alan
pan has his way, that’s all but
(page 38). In anticipation of fur-
ed action, mortgage lenders have
the average rate on a 30-year
ge from 6.95% in late April to
8% today, the highest level in
ears. Economists and market
rs are betting that higher rates
ally rein in the U.S. housing
which will go a long way in help-
enspan slow down the economy.
the housing market bends under
ght of higher interest rates, nei-
ill the economy,” says Mark M.
an economist with Regional Fi-
Associates in West Chester, Pa.
li reckons that total housing-re-
ctivity—everything from home-
g to purchases of home furnish-
the wealth effect created by
real estate prices—accounted for
h as 25% of the growth in real

gross domestic product in the first quar-
ter of this year and 27% in the second
quarter. But as the sector bumps up
against higher rates, housing may end
up being a drag on the economy in the
fourth quarter, sapping growth. “Hous-
ing is playing a disproportionately im-
portant role in influencing the perfor-
mance of the broader economy,” Zandi
notes.

A SPREE. The ascent of the stock mar-
ket may be getting credit for driving
the consumer-spending spree, but many
economists say the real propellant has
been brick-and-mortar wealth. “Any
wealth effect from [stocks] remains con-
centrated among high-income house-
holds,” says Diane C. Swonk, chief econ-
omist at Bank One Corp. “The larger
issue for most is the equity in their
homes and their ability to tap into it.”

And tap they have.
The Federal Reserve
estimates that since
1995, capital gains from
home sales have added
as much as \$150 billion
annually to the econ-
omy. Swonk figures that
“cash out” refinancing,
in which homeowners
get cash up front in
exchange for a bigger
mortgage, contributed
about \$60 billion in ex-
tra income for con-

TRADING UP

Cerkleski and
Braley just
bought a new
home and
locked in a 7.5%
rate—expecting
higher interest

sumers in the past
year alone—much of
which ended up be-
ing splurged on new
cars and home re-
modelings, with little
going into savings.
Now that higher
mortgage rates have
all but dried up the
refinance binge,

Swonk next expects the refi bust to cut
into consumer spending—chopping the
growth rate to 3% in the fourth quarter,
from 7% in the first.

No problem. David F. Seiders, chief
economist of the National Association
of Home Builders, and others say the
sector could use a cooldown, as the tor-
rid pace over the last 18 months has
left builders struggling to keep up with
demand and sent prices soaring. “A
slowdown in the market is probably a
healthy thing right now,” says Bob Talk-
ington, senior vice-president for resi-
dential real estate lending at Dallas-
based Guaranty Bank. “I’ve been in the
business since 1970 and I’ve never seen
a market where demand is exceeding
supply in so many markets across the
country all at the same time.”

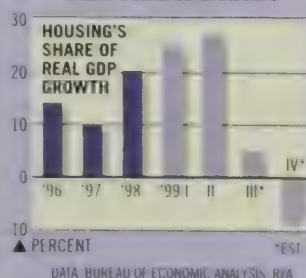
Higher rates have yet to dampen
home sales, but they probably will in
time. The National Association of Home
Builders’ Housing Market Index, which
gauges builders’ future expectations for
the market, fell three points in July, to
74, reflecting, in part, builder concerns
about rising rates, the group says. And,
in June, housing starts dropped 5.6%, to
an annualized rate of 1.57 million units,
representing the slowest home-building
rate in more than a year—although the
slowdown had as much to do with short-
ages of labor and materials as rates.

Prices have not felt a chill—although
in posh Silicon Valley areas there was a
pause as high rollers, poorer after the
Net-stock correction, headed for the
sidelines. In June, national median prices
on existing home sales jumped a record
4.3%, to \$137,000, while volume sur-
passed expectations, jumping 10.6% in
June, to a seasonally adjusted annual

rate of a record 5.53
million units. Housing
experts and economists
say the surge was al-
most entirely because
of consumers such as
Cerkleski and Braley
jumping into the mar-
ket to lock in lower
rates. In real estate, as
in comedy, timing is of-
ten everything.

By Stephanie An-
derson Forest with his
real reports

WILL HOUSING BECOME A DRAG?



COMMENTARY

By Lee Walczak and Richard S. Dunham

NEWT IS IN EXILE. HIS IDEAS AREN'T

He lost his job, forced out as House Speaker after the GOP's '98 election drive fizzled. He lost his soapbox, relinquishing his role as the Republicans' top theoretician. He even lost his marriage. In court papers filed on July 29, Newt Gingrich revealed his 18-year union with his second wife, Marianne, was, like his political dreams, "irretrievably broken."

Nowadays, the former revolutionary toils at the staid American Enterprise Institute, studying his latest enthusiasm: the link between technology and medicine. He tapes commentaries for Premiere Radio, the talk network that's home to Rush Limbaugh. There are speeches to true believers for \$50,000 a pop. And there's a new consulting firm, The Gingrich Group, which an aide says "will help corporations shape their strategic visions years into the future." So far, very few takers.

UNDIMMED INFLUENCE. But don't shed any tears for Newton Leroy Gingrich. Though his psychic losses are many, his influence is undimmed by exile. As Republicans craft an agenda dominated by huge tax cuts and anti-government rhetoric, the doctrine Gingrich shaped over two decades in the party trenches still resonates.

The GOP's embrace of a tax cut that's sure veto-bait? Pure Newt. The drive to lock away Social Security funds? Ditto. From medical savings accounts to antimissile defense systems, Newt's fingerprints are everywhere.

Even the high priest of Republican-style compassion, Texas Governor George W. Bush, is campaigning on outtakes from Newt's '94 Contract With America. Bush would slash tax rates, boost defense spending, and

curb trial lawyers. "Stylistically, people are running from the Newt legacy," says Marvin N. Olasky, a University of Texas professor who has counseled both Gingrich and Bush on social policy. "But if you look at substance, the legacy lives."



The GOP's tax-cut plans and anti-government rhetoric are pure Gingrich

The influence is clearest on taxes. Gingrich felt megacuts would unify social and economic conservatives by helping restrain social spending and government growth. And Gingrich reckoned a Clinton veto of a GOP tax bill would stampede voters to the Republicans. That underlies the GOP's push for a 10-year, \$792 billion tax cut. "The tax plan is Newt-like because it paints bright lines in bold

colors," says Marshall Wittman, a Heritage Foundation scholar. "He used taxes to polarize."

Gingrich was also behind the decision to go along with the President's "save Social Security first" shtick only to remove the Democrats' ability to accuse Republicans of pillaging seniors' pensions to pay for tax cuts for the rich. But his fix for the retirement system—and it's still the GOP's—was creating private accounts to allow individuals to invest as they choose. This fall look for Bush to embrace private accounts and a modicum of payroll-tax relief. "Newt's radio active now, like LBJ and Nixon," says John J. Pitney, a Claremont McKenna College political scientist. But "years from now, people will see how much of the debate he shaped."

Somewhere, Gingrich may be smiling—but that's conjecture, of course. Aides will confirm only that he's out of the country. Gingrich has shunned interviews to focus on his new interests and his Friends of Newt Gingrich political action committee, which claims it raised \$1.3 million for the campaign of GOP technofuturists. "This time," says an associate, "we're going to contribute only to people who share the vision."

In fact, recipients have to pass a litmus test by answering a questionnaire. But Newt may not have to canvass that many before finding candidates worthy of his help. Inside the GOP tent, he still has a lot more supporters than he may think—and certainly more than Republicans are willing to let on.

Walczak is Washington bureau chief; Dunham covers the White House.

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TELECOMMUNICATIONS

WHAT WILL AT&T DO WITH EXCITE@HOME?

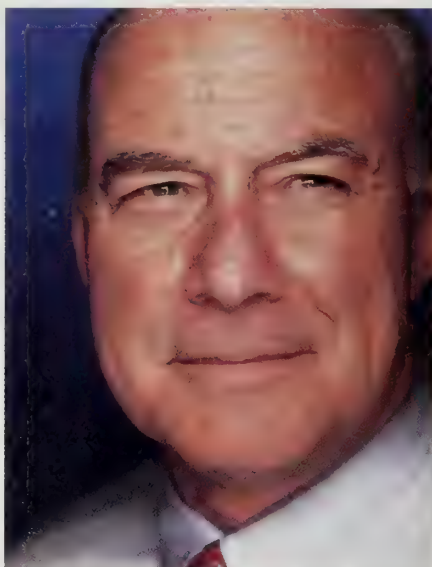
Keep the pipelines, sure. But the content raises problems

If you're puzzled about what AT&T plans to do with Excite@Home Corp., you're not alone. AT&T is wondering, too.

Excite@Home, in which AT&T holds a 58% voting stake, is the much-ballyhooed company responsible for rolling out speedy Internet access over the cable networks of companies including Tele-Communications Inc., which AT&T acquired earlier this year. But Excite, an Internet portal, and @Home, the company that will bring you cable Net access, were once separate companies. AT&T is pondering whether that should be the case again.

Inside AT&T there's a high-stakes debate going on about the future of Excite@Home. Why? Because AT&T CEO C. Michael Armstrong thinks that offering only Excite's content could hurt his ability to recoup his \$110 billion investment in TCI and his other cable property, MediaOne Group. Perhaps, he reckons, AT&T could do better striking deals with mega content providers, such as Yahoo! and America Online. An additional benefit: Armstrong might also skirt regulatory control over broadband service by providing his own form of open access.

DISCONNECT. Already, there are reports that suggest possible outcomes: Business Week Online reported portal Yahoo! Inc. has held discussions to acquire Excite@Home. If that were to happen, some sources indicate that Yahoo! might keep Excite, and AT&T could either retain control of @Home or @Home might be spun off. Separately, AT&T confirmed



it held talks with AOL, although the kind of deal discussed was not spelled out. AT&T insiders say an overhaul in Excite@Home's strategic plan is likely. And even outsiders see the need. "There's a disconnect between what Excite@Home's management is pursuing and what AT&T wants," says John H. Corcoran, an analyst at Stephens Inc.

What Excite@Home CEO Thomas Jermoluk wants is to build Excite@Home into a content company that could offer customers virtually everything they need online. Jermoluk cut the deal to buy Excite because he understands that a company that combines Net access and content, like AOL, is more valuable than two separate operations. Jermoluk has a key

supporter: L. John Doerr, who sits on Excite@Home's board and whose venture firm, Kleiner Perkins Cauberg & Byers, holds a major stake.

What's best for Excite@Home is not necessarily best for AT&T. Armstrong wants to offer a broad variety of content. With what he calls an "open interface," an @Home subscriber would get an opening screen with six content providers to choose from. That would roll out its Net service faster than if the task were left to Excite@Home alone. There are two major hurdles. Excite@Home now has an exclusive contract to market broadband service on AT&T's cable network through 2002. And to sell Excite@Home, it needs approval from now reluctant owners, Cox Communications, Comcast, and Kleiner Perkins.

Meanwhile, the stocks of both companies

ON THE PROWL
AT&T CEO
Armstrong may
still need to
court other
providers

Excite@Home and AT&T are suffering. With fears that AT&T isn't giving the company its full support, Excite@Home shares are down about 50% in the last 12 weeks. AT&T's

tumbled to 48.44 on Aug. 11, a 52-week low, although that's at least partly because of MCI WorldCom Inc.'s plan to cut long-distance rates.

While AT&T doesn't have complete control over Excite@Home, bet on Armstrong being able to get his way with Excite@Home. That means AOL probably will be able to market the service for AT&T. "I think it is inevitable that the two companies will come to terms," says Richard G. Lamm, an analyst with Goldman, Sachs & Co. "AT&T has the network and AOL has the customers." That would help Armstrong pay off his \$110 billion cable investment.

By Peter Elstrom in New York
Linda Himmelstein in San Mateo

Three Scenarios for Excite@Home

OPTION #1

AOL ON STEROIDS Excite@Home CEO Tom Jermoluk would like to build the company into an online power with a full range of content and services. But that would diminish AT&T's ability to profit from its cable network by cutting deals with other content companies. **Bottom line:** Excite@Home shareholders would be happy, but AT&T would suffer.

OPTION #2

TOE IN THE WATER The current situation. AT&T is in the content business, but it's not taking full advantage of Excite as Jermoluk wants. AT&T is having a hard time cutting deals with other content companies because Excite@Home has the exclusive right to market AT&T's cable Net access. **Bottom line:** Excite would be a largely wasted asset.

OPTION #3

JUST PIPES AT&T could sell off Excite and take control of the @Home business. That way, AT&T could market the content of Yahoo! or AOL to its customers. A key issue will be who controls the customer; AT&T wants to handle billing so it can cross-sell long-distance and wireless service. **Bottom line:** AT&T would benefit, but Excite@Home would suffer.

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COMMENTARY

By Roger O. Crockett

WHY MOTOROLA SHOULD HANG UP ON IRIDIUM

When Motorola Inc. executives dreamed up a globe-girdling satellite communications system to connect wireless telephone users anywhere on earth, it seemed like a grand idea. Motorola's engineers built a 66-satellite orbital network with technology so complex that Motorola CEO Christopher B. Galvin has called it "the eighth wonder of the world."

More than a decade—and a billion dollars—later, the wonder is whether the project will fly. Since it was launched in November, Iridium has signed only 20,000 subscribers, far below the pace needed to nab 500,000 by yearend. Revenues have fallen short of the \$30 million promised to bankers, putting Iridium in default on an \$800 million line of credit. Now lead investor Motorola, with its 18% stake, is under pressure to pony up more money.

That's the last thing Motorola should do. It could exit now with hardly a blemish on its income statement. And bailing out would enable executives to continue the turnaround in the company's core products: digital telephones and chips. **VAIN HOPE.** But Galvin is signaling support for the ill-starred project as it comes under intense financial pressure. Chase Manhattan Corp. wants Motorola to put up \$300 million to guarantee the \$800 million loan. That's on top of a \$750 million loan Motorola has already guaranteed. And with a \$90 million interest payment due on Aug. 15, bondholders are looking to Motorola, too. Will Galvin dig into his pocket again? "We believe in the business model," he says. "We hope we will find a way to get through this."

Galvin argues that wireless naysayers were skeptical when Motorola entered the cellular phone business back in 1983. Critics predicted consumers wouldn't abandon their regular phones, but the number of wireless subscribers will hit 539 million worldwide in 2000. "This is

like déjà vu all over again," Galvin insists.

Not necessarily. While industrial customers working in such remote places as deserts may want Iridium, it needs a broader range of customers to be profitable. But Iridium's birds can't handle more than 1,100 simultaneous calls each. That means Iridium can't achieve

QUICK EXIT
If CEO Chris Galvin bails out now, he stands to lose a manageable \$600 million



economies of scale needed to offer prices attractive to larger numbers of users.

What's worse, competition can only be expected to heat up. Globalstar is slated to start service in September. Teledesic, Lockheed Martin, and Boeing want to launch services. Rivals will offer cheaper packages than the \$1,500 Iridium charges for phone gear and its \$3-a-minute calls.

All of this is making investors anxious. Though Motorola is coming off second-quarter earnings of \$273

million, up 44-fold from last year, shares dropped 6% in the past month as Iridium's troubles mounted. "Investors are worried Motorola is going to hang on," says Mark McKechnie, a wireless-telecommunications analyst for Bank of America Securities.

If the company doesn't, it could emerge relatively unscathed. Its financial exposure is \$1.3 billion, including bank guarantees, bonds it owns, and \$400 million in vendor financing. While that shrinks Motorola's balance sheet, any loss would count against earnings.

DISTRACTION. And Galvin established a "profit reserve"—a cul-de-sac to stash \$700 million in earnings from providing services and hardware to Iridium—rather than letting the profit flow to the bottom line. The net effect: Motorola's exposure is whittled down to roughly \$600 million. That's easily offset by cash Motorola is likely to record from recent sales of other businesses, such as its semiconductor-components group. Better still, if other investors rescue Iridium or buy the assets,

Motorola could still rake in cash from selling the new venture service hardware and operating its satellites.

The most disturbing downside to hanging on: As long as Iridium ties down Motorola, the company could be distracted from its core businesses. With its new focus on embedding chips in automobiles and appliances, Motorola's semiconductor operation last quarter eked out a profit for the first time in years. And after initially missing the transition from cellular to digital wireless telephones, Galvin has made huge strides by introducing an impressive lineup of digital handsets. Motorola also could focus on making new satellites for the Teledesic system.

Galvin already has his hands full keeping the critical lines of business in good shape. He's begun a credible turnaround. Dumping Iridium will only allow it to continue.

With Catherine Yang in Washington

Systems Transformer

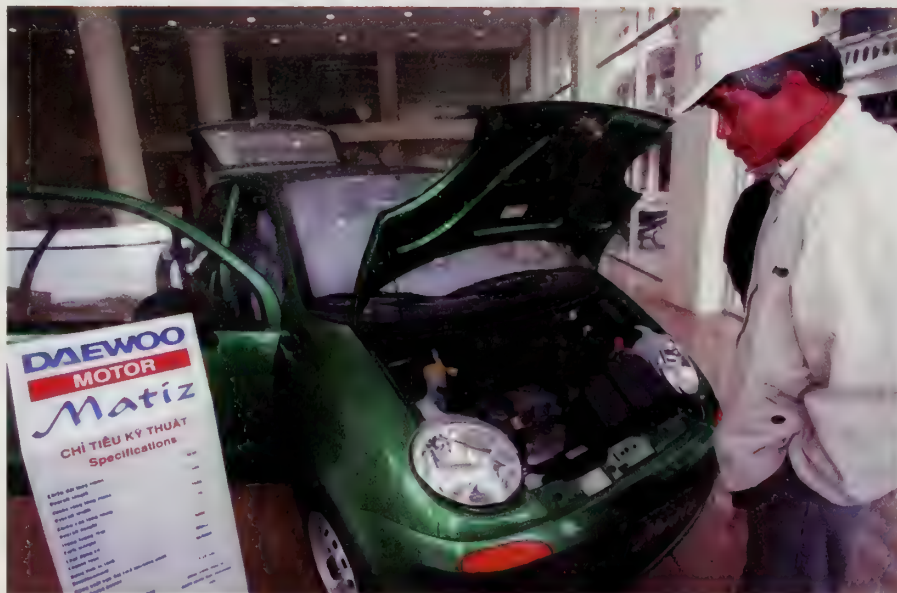
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AUTOS

HOW DAEWOO RAN ITSELF OFF THE ROAD

In the drive to go global, it refused to quit when it was behind

Kim Woo Choong thought he'd scored quite a coup in 1993. That year, his Daewoo Motor Co. got the green light to assemble cars in Vietnam. Then the economy stalled, and demand for cars plunged by one-third, to just 5,200 units annually. Daewoo's sales shriveled to 423 vehicles in 1998. Undaunted, Daewoo launched a new car, the Matiz, for \$8,800. Sales in Vietnam may now double this year. But rivals doubt Daewoo's total \$33 million investment is paying off. "There's no way they could make money at this price," says a foreign auto executive in Hanoi.

The Vietnam quagmire helps explain why Korea's Daewoo Group is in such a mess that creditors are now trying to force its breakup—and why it is negotiating with General Motors Corp. to sell pieces of its car company. From the U.S. to India, Chairman Kim is stumbling in his quest to build a car giant. In

most places, the reasons are similar: plunging into dicey countries, selling at a loss to gain share, and refusing to retreat when the cause is hopeless.

GM is vague on what it wants out of Daewoo Motor. An earlier joint venture ended in 1992 over management disputes, including Daewoo's desire to export its own cars to GM markets abroad. This time, says GM President G. Richard Wagoner Jr., "we're looking at specific assets." Analysts suspect GM would like Daewoo's new plant in the Korean city of Kunsan, and perhaps its plant in Poland. "Nothing is imminent," says GM CEO John F. Smith Jr. Daewoo declined requests for interviews.

"NO WHITE KNIGHT." GM may have a hard time pricing any deal with Daewoo. The company discloses little about how much of its assets it has pledged as collateral to creditors, or how much of its debts are guaranteed by Daewoo sister com-

MATIZ ON SALE: The bargain motor car didn't save the company in Vietnam.

panies. "It's hard to know what Daewoo Motor is really worth," says William L. Ross Jr., executive managing director of Rothschild Inc. Analysts say GM probably will refuse to take on Daewoo Motor's \$10 billion in debts. "GM is not a knight here," says Hank Moon, a Seoul-based consultant.

Daewoo Motor is believed to be operating far below its global capacity of 3.3 million units. The company booked out a \$14.5 million profit of \$4.2 billion last year. Some observers believe that the company is using affiliates to hide losses, which Daewoo denies.

Daewoo's big problems began when Korea's economy crashed. In January 1998, the company bulked up by buying Korea's Ssangyong Motor Co. Sales plunged by 56% in Korea last year. Daewoo pumped up in Europe and the U.S. In Britain, Daewoo offered 1,000 customers trade-ins after 18 months for new models at no cost. In the U.S., it launched three new models starting with the \$9,000 Lanos and a back, aimed at college students.

Daewoo sales in Britain spurred to 30,400 units, in 1998. "In my view, this is unsustainable," says Automotive Industry Data Ltd. analyst Peter Schmidt, because success depends on cut-rate prices. In America, Kim's lease strategy produced sales of 14,000 cars in the first six months of 1999. Back home in Korea, Daewoo offering car loans that are interest-free for up to 30 months. "It's good for the consumer—but it's killing the company," says Chung Mong Gyu, chairman of Hyundai Motor Co.

Chairman Kim's game plan for revitalizing Daewoo Motor is unclear. Most analysts agree it will be hard for Kim to salvage Daewoo Motor without surrendering control. Daewoo's share price has bounced over many potholes of the Korean economy in years past. But the chairman's journey finally looks near.

By Jennifer Veale in Seoul, Larry Armstrong in Los Angeles, Joann Muller in Detroit

Daewoo's Global Headaches

KOREA	U.S.	WESTERN EUROPE	INDIA	VIETNAM
Car sales plunged by 56% in 1998, to 234,000 units, as Daewoo was adding capacity.	The goal to sell 100,000 cars in its first year is unlikely to be met. Daewoo is offering steep rebates.	Sales have risen in Britain, Germany, and Italy. But analysts don't expect the gains to last.	Analysts estimate Daewoo is losing more than \$30 million annually by offering \$2,500 discounts.	Its hopes of hitting big by arriving early have been dashed by rivals and a decline in demand.



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STRATEGIES

WILL HUIZENGA'S LATEST U-TURN WORK?

AutoNation refocuses on new cars and fixed prices

For all his storied successes in trash-hauling and video rental, H. Wayne Huizenga has found the auto business a bumpy ride. In the past three years, he has shifted the focus of his Fort Lauderdale-based AutoNation Inc. from used-car megastores to rentals to new-car dealerships, with disappointing results. After an extraordinary runup two years ago, to nearly 45, AutoNation's stock remains stuck in a ditch at around 15.

Now, Huizenga is making another U-turn. On Aug. 2, he announced he will jettison his auto-rental businesses. He plans to refocus AutoNation back toward new-car sales—co-branding nearly 400 franchises in 23 states with the AutoNation name by Oct. 1. And within a year, he plans to implement a “no-haggle” pricing policy across the entire chain. Taken together, he says, the moves will reinvent auto retailing. “We haven’t been able to get all cylinders running at one time,” concedes Huizenga. “But now, we think we have the business model.”

POTHoles AHEAD. To succeed, he knows he needs more auto expertise. So Huizenga and longtime colleague Steven R. Berrard will soon step down as co-CEOs in favor of a car veteran. “We’ve done a good job,” Huizenga says, “but we need to bring in some fresh talent to take it to the next step.” Two weeks ago, John H. Costello—a former Sears, Roebuck & Co. executive who served just eight months as AutoNation’s president—was replaced by Michael E. Maroone, a second-generation car dealer.

Even with the turnover, some observers think Huizenga’s latest plan may hit more potholes along the way. “This business is much more complex than anything Huizenga’s done in the past,” notes Tom Thomson, an auto-retail analyst at First Union Capital Markets. And Jeremy P. Anwyl, president of auto consultant Marketec Systems Inc., says the rebranding effort and shift to fixed pricing will hurt short-term profitability. Huizenga has bought the best franchises in many cities, Anwyl says, but by changing both the management style and dealership’s name, he’ll wipe out much of the original commercial value. No-haggle pricing also leaves room for

other retailers to undercut the chain. “If you don’t mind doing a little bit of arm-wrestling with a dealer, you’re going to get a better deal,” says Anwyl.

Still, Huizenga remains confident. Since December, AutoNation has been testing the rebranding strategy and no-haggle pricing in Denver. There, the company consolidated its 17 dealerships under the “John Elway AutoNation” name, after retired Broncos quarterback John Elway, who owned six of the stores. So far, unit sales in Denver are up 40%, and AutoNation has boosted its market share in brands it sells to 34% from 24%, the company says.

That success, though, came at the expense of the bottom line. AutoNation slashed prices to levels that cut pretax margins in Denver below 2%—lower than the industry average of 2.5%. Huizenga says the company should be able to raise prices enough to bring margins above 3% by yearend.

Given Huizenga’s track record, many investors are eager to see him redeem himself. Following his proven formula of using a lofty stock price to fund acquisi-



GIVING UP THE WHEEL Huizenga says “fresh talent” is needed, so has hired a car veteran as CEO

tions, he has done a remarkable building revenues. Dealership sales grown, along with the number of Nation outlets, from \$2.9 billion to a projected \$19.5 billion this year, AutoNation is more than six times the size of its closest competitor. “look out two to three years, a well-branded nationwide auto dealer make a nice living,” says Christopher Grisanti, research director at investment managers Spears Benzak Salomon Farrell, which owns nearly 4 million shares. Even rivals are impressed. “They’re bold and creative,” says Smith, president of Sonic Autom Inc., with 78 dealerships.

Despite the fall-off in its stock AutoNation still trades at about times expected 2000 revenues, and note, vs. 11 times for other auto retailers. That signals that Wall Street thinks AutoNation is on to something. But it also means AutoNation has much further to fall if Huizenga to reinvent auto retailing as promised.

By David I.
in Fort Lauderdale

Growth Is on Autopilot

	1996	1997	1998	1999*
NEW-CAR FRANCHISES	16	256	371	396*
USED-CAR STORES	7	25	42	42*
AUTO REVENUES BILLIONS	\$2.9	\$6.1	\$12.6	19.5**
AUTO OP. INCOME MILLIONS	\$33	\$(68)	\$396	618**

* Estimated full year

** As of June 30, 1999

DATA: BUSINESS WEEK, SALOMON SMITH BARNEY

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EDITED BY MARK FRANKEL

ALCOA LAUNCHES A BID FOR REYNOLDS

ALAIN BELDA, ALCOA'S NEW chief, won't be shunted aside by the consolidation sweeping the aluminum industry. After unsuccessfully wooing Reynolds Metals in March, Belda launched a \$5.6 billion hostile cash-and-stock takeover bid for the U.S.'s No. 2 producer on Aug. 11. Citing the industry's "rapidly changing profile," Belda warned Reynolds executives in a letter that "this is a transaction we must pursue." The deal would preserve Alcoa's No. 1 status; the day before, Canada's Alcan Aluminum, France's Pechiney, and Switzerland's Alusuisse Lonza Group announced their own plans to merge. But U.S. regulators

have already halted asset sales between Alcoa and Reynolds and could squelch this move.

ILLNESS WON'T STOP SOUTHWEST'S CEO

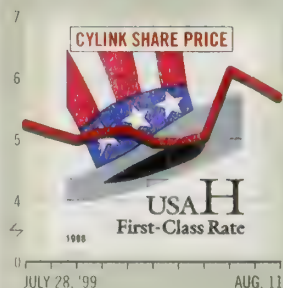
SOUTHWEST AIRLINES CEO Herbert Kelleher announced Aug. 11 that he has prostate cancer and will undergo radiation treatment for eight weeks. Kelleher called the disease "a mundane, routine, and fairly insignificant case," but said he was making it public to squash rumors. Kelleher, 68, said tests show no other health problems, so he will not surrender any of his usual duties.

The airline's flamboyant co-founder insists "there's no need to update any succession plan." That leaves Southwest flying without an obvious heir apparent (BW—Aug. 16).

CLOSING BELL

STRONG LINK

Investors gave Cylink the stamp of approval for making the U.S. Postal Service's new E-postage system secure. Cylink's stock jumped 21% on Aug. 9, to 6½, after the USPS authorized Stamps.com and rival E-Stamp to sell E-postage over the Net. Actually, Cylink, in Sunnyvale, Calif., has ended its hardware and service contract with the USPS, but investors may be eyeing September, when it reveals a commercial version of its security system. It closed Aug 11 at 5½.



A GRAPHICS STAR RESTRUCTURES

THE WORLD DOESN'T APPRECIATE technical grandeur for its own sake anymore; that's the lesson in Silicon Graphics' drastic restructuring announced Aug 10. Besides selling its unit which makes Windows-based workstations, it will stop designing the chips that made its gear *de rigueur* for movie special-effects houses. And it will also unload what's left of Cray Research, which it bought in 1996 for \$576 million. SGI's new plan is to hitch its wagon to Linux, the fast-emerging rival to Microsoft's Windows. While that sounds good, analysts say SGI's best chance is to be acquired.

FINES FOR UPS MAY THREATEN ITS IPO

WILL UNITED PARCEL SERVICE'S IPO be scuttled? A tax

HEADLINER: MARK HOGAN

FROM ASSEMBLY LINES TO ONLINE

Mark Hogan will bid adieu to General Motors' assembly lines not a moment too soon for the United Auto Workers. Three months ago, UAW chief Stephen Yokich was so furious about Hogan's advocacy of shifting some sub-assembly work to nonunion suppliers that he urged GM to can Hogan as general manager of its small-car operations. Instead, GM promoted Hogan on Aug. 10, placing him in charge of a new Internet business unit, e-GM, that GM says could generate \$6 billion annually. He will oversee global integration of a range of high-tech



services, from GM's OnStar vehicle communications service to its surging BuyPower Internet site. The idea: leverage GM's Web muscle. "We've come to realize that if we don't move with Internet speed, we could become extinct," says Hogan, 48. Characteristically, he's barging ahead in his new job. "I'm not going to ask permission. I'm going to ask for forgiveness." Meanwhile, GM has shelved plans for the controversial plants Hogan advocated, a move sure to please the UAW in ongoing contract talks.

Joann Muller in Detroit

court judge on Aug. 9 ordered UPS to pay hundreds of millions of dollars in back taxes and penalties for a reinsurance scheme UPS started in 1984. The IRS claims UPS shifted insurance expenses offshore to avoid taxes. UPS says it may appeal, but that the case won't affect the \$3 billion to \$5 billion IPO planned for later this year. Analysts, though, wondered whether investors would hesitate, faced with a tax bill that could possibly top \$1 billion, the company admits.

BEAR STEARNS SETTLES CHARGES

AFTER A TWO YEAR INVESTIGATION by the Securities & Exchange Commission, Bear Stearns Cos. will pay \$38.5 million to settle civil and criminal charges in connection with its customer, A. R. Baron & Co., a now-defunct

brokerage firm that cost millions in investor losses. The SEC also charged Bear Stearns President Richard Harriton with fraud. Harriton, who resigned from Bear Stearns Aug. 5, the day the SEC announced the settlement, is fighting the charges. "The message has been that a clearing broker should not take the traditional ture of hear no evil, see no evil," says John Coffee, professor at New York University Law School.

ET CETERA...

- Procter & Gamble will closely held pet-food manufacturer for \$2.3 billion.
- Lucent Technologies will acquire International work Services for \$3.8 billion.
- Duncan Hennes, formerly of Bankers Trust, is new of Soros Fund Manager.
- IPOs live! Shares of Internet vendor Red Hat tripled on first trading day.

There's a place just up ahead. A never-before place on the Internet where more than companies and millions of people are seamlessly connected. Where business happens in wonderful, new ways and the possibilities are endless. See you there in September.

SAP



EDITED BY PAULA DWYER

AT LEAST YOU DON'T HAVE TO EAT RUBBER CHICKEN ONLINE

Democratic Presidential hopeful Bill Bradley made headlines when midyear fund-raising reports showed him giving Vice-President Al Gore a run for the money. And in cyberspace, Bradley's fund-raising star shines even brighter. So far, he has raked in \$312,000 over the Net, far more than Gore and almost as much as all other contenders combined.

Besides using his site to mobilize foot soldiers, Bradley uses pop-up promotions to steer supporters to a donors' page. The upshot: His site is luring thousands of younger, first-time givers—just the sort of nontraditional voters who are the bulwark of his campaign.

Bradley isn't the only candidate trolling for E-dollars. When the Federal Election Commission on June 6 O.K.'d federal matching funds for credit-card donations over the Internet, campaign Webmasters quickly turned mostly informational sites into money-raising machines. The sums raised so far are small, but pros say the potential is huge.

Online fund-raising is part of a broader trend that's seeing candidates embrace the Net's interactivity to connect with voters. "What TV did for the 1960 Presidential election, the Internet will do for the 2000 races," says Janice B. Griffin, National Chair of the Women's Leadership Forum, a Democratic donor network. The Republican National Committee, for example, has raised \$200,000 online since 1996. By 2004, it expects the Net to generate 25% of all contributions of \$100 or less.

Although Gore was slow to promote online giving, he's pedaling fast now. On Aug. 10, while the Veep spent nearly an hour online answering questions, his site repeatedly flashed "to contribute to Gore 2000 online, click here."

Online fund-raising won't replace traditional solicitations anytime soon, though. Rather, it lets candidates broaden their appeals beyond the retirees who tend to respond to direct-mail

itches. By attracting more "low-dollar" donors, online giving can potentially dilute the power of fat cats—making politics more democratic. The Net, says R. Rebecca Donohue, chair of Hockaday Donatelli Campaign Solutions in Alexandria, Va., is "the ultimate grassroots fund-raising mechanism."

Not surprisingly, GOP Presidential aspirant Forbes launched his campaign on the Net, has big plans for Netting. On June 16, he ducked out of a dinner at the Waldorf Astoria, where contributors had paid \$1000 a plate, to chat for 20 minutes with 400 supporters who paid \$10 each to attend online.

Now, armed with demographic files of 25,000 registrants to help, Forbes is mulling online fund-raising events for select groups. Rick Warren, Forbes's Net consultant, says that Time magazine Chairman Caspar W. Weinberger, a former Defense Secretary, may host an online reception for veterans. Also on the drawing board: e-mail solicitations to doctors.

Offline popularity is no guarantee of E-donations. Exhibit A is George W. Bush, who may be shattering fund-raising records but so far has raised only \$41,572 online. His team blames a clunky Web site and promises to make it user-friendly.

Fund-raisers are coming to love the Net because it's fast and cheap. Faced with a stack of unfulfilled pledges as the June reporting deadline loomed, GOP operative Nancy Sklar of Arlington, Va., E-mailed reminders to prospective donors—and got half to ante up. "If I had phoned, I would have been lucky if 10% called back," she says. Now, if so, she could only find a way for politicians to kiss babies online.

By Amy L.

WWW.GIVEHERE.COM

WEB SITE	AMOUNT RAISED*	NO. OF DONORS
WWW.BILLBRADLEY.COM	\$312,000	2,000
WWW.McCAIN2000.COM	100,000	1,100
WWW.EDOLE2000.ORG	76,000	NA
WWW.ALGORE2000.COM	70,000	NA
WWW.GEORGEWBUSH.COM	41,572	327
WWW.FORBES2000.COM	30,000	1,000

* Dollar figures are through July 31

CAPITAL WRAPUP

BIG BIZ AND SOFT MONEY

► Fueled by record corporate giving, Republicans have opened up a comfortable lead over Dems in the soft-money chase. While the two parties raised nearly identical amounts of the unlimited contributions from wealthy individuals, the GOP raked in 67% of Corporate America's \$25.8 million in soft-money donations in the first half of 1999, according to Campaign Reform Project, a group backed by ex-investment banker Jerome Kohlberg.

Overall, the two parties have taken

in \$46 million in soft money this election cycle, with \$27 million going to the GOP and \$19 million to Dems. That's up 15% over the first six months of '97 and a 38% jump over the same period in '95.

The biggest soft-money donor, AT&T, raised its contributions from \$269,921 in 1997-98 to \$751,150—and counting. The giving accelerated with the November, 1997, arrival of CEO C. Michael Armstrong.

AT&T isn't the only telecom company upping the ante. Two others—SBC Communications and BellSouth—have

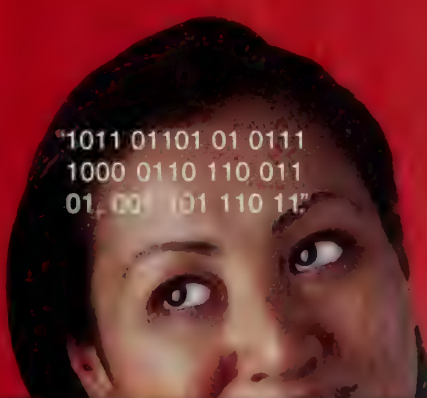
almost tripled their soft-money donations in the past two years. While 60% of AT&T's largesse goes to the GOP, other telecom donors more evenly divide their giving. The Democrats' share has increased from 23% to 33% since '97.

Philip Morris, Pfizer, and Enron are among the big corporations whose soft-money overwhelmingly goes to the GOP. Business interests gave 10 times more than organized labor, which kicked in \$2.5 million. But 92% of union cash went to Democrats.

By Richard S. Durbin

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HONG KONG

A BOURSE OF THEIR OWN

Hong Kong's GEM may give Asia's tech startups a big lift

Action Electronics, a small maker of computer monitors in Taiwan, has a size problem. It wants to expand its two factories in China, but Taiwan limits how much local companies can invest there. The company's solution: Head for Hong Kong's Growth Enterprise Market, a soon-to-open second board aimed at small and midsize high-tech companies. Action hopes to raise \$13 million next year by listing its Hong Kong subsidiary, which can then invest on the mainland, free of Taiwanese restrictions. Says Action Vice-President Chao Teng-peng: "The new Hong Kong market should be a good opportunity for us."

And for other com-

panies in the Greater China region. When the Stock Exchange of Hong Kong launches GEM this fall, the Nasdaq-style market promises to alter life as Asian tech startups know it. Whether they are in Taiwan, Hong Kong, or China, tech entrepreneurs have often been long on ideas and short on capital. The new bourse, designed for companies without proven track records, will enable them to

finance growth and venture capitalists a route when it's time to cash out.

While GEM will start with a single listing, don't worry about it. The board expects to have up to 50 listed companies within its first year. Dozens of tech companies are said to be in line. And in China, interest among main-land companies is so high that five GEM seminars have each drawn 500 visitors.

GEM's timing is impeccable. While the Internet craze is abating on Wall Street, it is beginning to take off in Asia. An all-electronic exchange for tech companies also should boost Hong Kong's chances of fending off competition from regional financial centers

such as Singapore and Shanghai.

For China, new sources of capital will be crucial as the country's economy increasingly driven by private companies rather than lumbering state enterprises. "These companies are reaching a stage where they need money to expand," says K.S. Lo, a property developer appointed by the Hong Kong Exchange to set up GEM. "If China's enterprise reform is successful, it will be the biggest gold mine in the world."

GEM faces challenges. For one, Asian tech companies dream of New York listings, not going public on GEM. policing a market with lots of startups will test regulators, given Hong Kong's taste for speculation. After past scandals involving Chinese companies listed on Hong Kong's main board, GEM admits there is potential for business. In publicity material, it calls itself the "Buyers-Beware Market for Informed Investors."

THE RULES AT THE NEW EXCHANGE

LISTING REQUIREMENTS

Company must be in operation for two years but does not need to show profitability. The Stock Exchange of Hong Kong requires \$6.5 million profits over the previous three years and three years in business.

DISCLOSURE

Twice a year, companies must compare performance to plans at listing. Financials must be published 45 days after each quarter. The main board doesn't require comparisons and wants financials every six months.

CORPORATE GOVERNANCE

Audit committees and compensation offers are mandatory. Investment banks must monitor listed companies for two years. Hong Kong exchange has no such requirements.

DATA: GROWTH ENTERPRISE MARKET

GEM's disclosure rules require swift
ation of financial statements, and
nies must report how closely they
lowing business plans. That's more
he main board demands. But GEM
make companies show they are
ble prior to listing. That opens
or to flimsy mainland ventures
ave no business offering stock.

IFUL Questions aside, the antici-
is palpable as GEM's launch draws
Neither GEM nor the local mer-
banking community is saying who
t first. But the money now is on
om, a portal in Sunnyvale, Calif.,
roots in Taiwan and China.
om could do GEM proud. It runs
s most popular Web site. Prepar-
list on Nasdaq, it could list on
the same time.

ever goes first, GEM aims for a
listings by yearend. About 40% of
thinking of listing are from Tai-
EM officials say. The rest are from
Kong and China. For Charles
CEO of Sohu Inc., a Beijing por-
m's draw is powerful. Since ven-
capitalists typically reap profits
a startup goes public, having no
t has made it tough to attract
"Many of the thousands of tech
ies starting in China were starv-
death," Zhang explains. While
too, is looking at a U.S. listing,
fers one thing Nasdaq never will.
i the same side of the globe as
," Zhang says. "Investors could
know a company's product."

argument doesn't convince
ne. Danny Cheng, co-founder of
s Software in Hong Kong, thinks
ight be too small, so he looks to
p. But unless Asian companies
following among analysts, in-
can lose interest. For the 12
listed in the U.S. and Hong
83% of trading volume comes
ong Kong. "Nasdaq is still the
rail," says L. Brooks Entwistle,
Goldman, Sachs & Co.'s Asian
it. "But we're very excited about
Taiwan companies are excited,
any view Hong Kong vehicles as
to skirt rules limiting mainland
ent to 20% of their equity.

Kong has a lot riding on GEM.
cession has prompted us to find
direction in innovation develop-
says Lo. The Hong Kong ex-
also hopes that even if tech
have peaked in the U.S., there
a market for Asian companies.
hole world feels much more con-
singing Hong Kong as a conduit
says Lo. He's hoping to build on
fidence. So is Hong Kong.

*heri Prasso in Hong Kong, with
in Moore in Taipei and Dexter
in Beijing*

SWEDEN

CAN THE WALLENBERGS SHIFT GEARS?

The Scania sale may show the way to a more powerful portfolio



By hanging tough
with Volvo, Wallen-
berg extracted a
price more than
double Scania's low
last year, before
Volvo began accu-
mulating stock in
January. The Wal-
lenbergs also real-
ized their ambition
of gaining influence
over Volvo, a tradi-
tional rival in
Swedish industry.
Investor is likely to
become the top

It may not have been the
deal he wanted, but Mar-
cus Wallenberg, chief ex-
ecutive of Investor, came out
looking like a winner. The
occasion was the Aug. 6 sale
of his family holding compa-
ny's 28.5% share of Swedish
truckmaker Scania to Volvo
for \$2.2 billion. After refus-
ing to sell the company ear-
lier this year, Investor per-
suaded Volvo to pay a stiff
\$38.80 per share, a 29%
premium over the closing
price on Aug. 5. The deal

values Scania at a hefty \$7.5 billion.
"Investor won the blinking match," says
John K. Lawson, an automotive analyst
at Salomon Smith Barney in London.

It's likely to be the first of many
deals for Wallenberg, who became In-
vestor's CEO in April. Once the Volvo
transaction is completed, he will have \$2
billion in cash and a chance to revitalize
Investor, which has lost momentum.
Some of its key companies such as tele-
com giant Ericsson have been strug-
gling. Investor is also under fire for
having too much of its portfolio in old-
line companies such as ball-bearing mak-
er SKF. Investor's stock is trading at a
30% discount to its underlying portfolio.

Wallenberg is under pressure to sell
off the laggards and put the money into
leveraged buyouts, venture capital, and
investments in the U.S. and Asia. In-
vestor may also add to its investments
in promising companies such as phar-
maceuticals giant AstraZeneca. "It de-
pends on the opportunities that come
along," says Wallenberg.



MARCUS WALLENBERG:
*He's under pressure to
sell off the laggards*

shareholder in Volvo, with
about 13% of the voting
stock and a board seat.

FLAT LAST YEAR. Marcus,
42, and his cousin Jacob, 43,
represent a younger genera-
tion of Wallenbergs, who re-
alize their influence depends
on Investor's performance.
Although Investor shares
piled up annual gains in the
20% range for the last 20
years, a flat performance
last year left the Wallen-
bergs vulnerable to the raid
on Scania. Investor stock

has managed a total return of only 10%
this year, below the 16% average for
the Swedish index.

So the Wallenbergs will remain under
pressure to do more deals. Stockholders
in Investor would like them to exit from
SKF. Scandinavian Airlines System is
only marginally profitable. These busi-
nesses "take up too much management
time" relative to the payoff, says David
E. Marcus, director of European in-
vestments at Franklin Mutual Advis-
ers, which owns about 8% of Investor.

Another Wallenberg company to
watch is Ericsson, which accounts for
about 16% of Investor's portfolio. It has
fallen behind Finnish rival Nokia in mo-
bile handsets. If Lars Ramqvist, who
has retaken the reins of the company,
can't turn things around, then Ericsson,
too, could become takeover bait. Marcus
Wallenberg is not going to be pushed
into rash moves. But just about every-
thing in his empire is on the table.

*By Stanley Reed in London, with
Ariane Sains in Stockholm*

ARGENTINA

A JOB HALF DONE

When Menem goes, what becomes of economic reform?

Leaning against a box of spark plugs in the auto-repair shop he owns in the Palermo neighborhood of Buenos Aires, Osvaldo Giro recites some depressing numbers. Even though the garage is in one of the city's most affluent areas, business has slumped, forcing Giro to cut his prices nearly 40% in the past four years. As a result, he and his seven mechanics are earning a third less than they were two years ago. "I'm working hard and my employees are working hard, but instead of getting ahead, we're slipping further behind," he complains.

Like Giro's business, Argentina's economy is floundering. From the growing ranks of the unemployed to Giro's \$800-a-month mechanics to the owners of the \$35,000 cars they repair, Argentines are deeply frustrated by the country's second recession since 1995. The economy will shrink by around 3% this year, keeping wages stagnant while the 14.5% job-

less rate climbs higher. Brazil's devaluation in January and low prices for Argentine exports helped push the country into its latest downturn. Meanwhile, Argentina's currency board, which pegs the peso to the U.S. dollar, limits the government's ability to use monetary policy to revive the economy.

But there's a deeper cause of Argentina's woes—its stalled reform program. As President Carlos Menem prepares to step down after 10 years in office, it is clear that the economic revolution he started by stamping out hyperinflation, selling off state-owned companies, and opening Argentina's markets is being left unfinished. Worse, it's likely to stay that way. The two leading candidates in the Oct. 24 election, front-runner Fernando de la Rúa of the opposition group Alliance and Eduardo Duhalde of Menem's Peronist party, don't appear interested in pushing for labor, tax, and fiscal reforms that would improve Ar-

RECESSION '99: After first term, Menem delayed structural changes. Now, with the economy in a slump, Argentines street people to job seekers to investors are feeling the pinch

gentina's competitiveness but rather belt tightening. "Neither of the candidates is making a serious proposal to the country about what they'll do, how they'll do it," says Felipe Noguerol, a Buenos Aires-based political analyst.

Leaving so much work incomplete increases the risk of doing business in one of the world's most attractive emerging markets. Argentina's gross domestic product per capita in 1998 was 19% higher than South Korea's, 72% higher than Brazil's, and nearly double Mexico's. Multinationals like Whirlpool Corp. to Renault ha-



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mutual fund you're selling. Or maybe
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way to get your packages
there. As directly as possible.
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time, or volume services for saving
money, Global Delivery Services™
from the United States Postal
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you grow global. And the
experience. Just ask the ladies in
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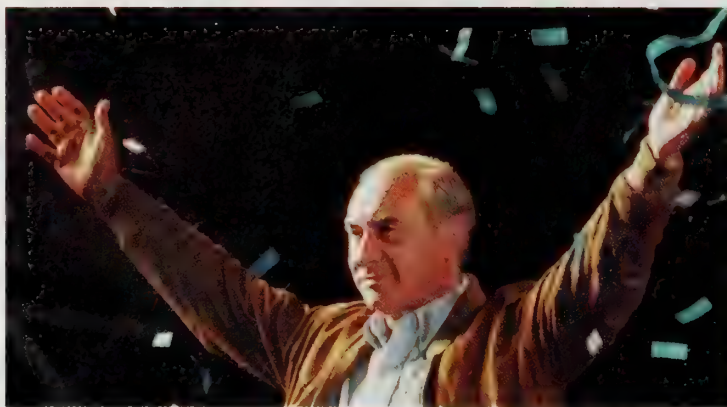
www.uspsglobal.com

vested more than \$25 billion since 1994. Argentina is also Latin America's most active foreign debt issuer, with \$7 billion in paper sold abroad this year.

For now, the country seems fit enough to avert a market meltdown. Its \$26.6 billion in reserves appears sufficient to fight off any speculative attack on the peso. Argentina's eight-year-old currency board requires that each peso in circulation be backed by reserves. The fact that the banking system is dominated by large foreign institutions such as Spanish banks Santander and Bilbao Vizcaya has discouraged Argentines from capital flight. And the International Monetary Fund has suggested that it would help Argentina if necessary.

RUBBER BULLETS. But as Brazil learned last year, reserves can drop precipitously if investor confidence wanes. Missteps by Argentina's leading candidates, renewed uncertainty in Brazil, or even a devaluation in China could prompt investors to pull money out of Argentina. Moreover, the currency board could come under pressure if the government fails to control its budget deficit and national debt. The debt, expected to reach \$145 billion this year—46% of GDP—has worried investors since Duhalde remarked in July that he might seek a moratorium on interest payments. He retracted the comment after the Buenos Aires stock market plunged 9% in a day.

The dismal economic situation is making Argentina an increasingly unruly place. On July 28, police in the northern province of Corrientes fired rubber bullets and tear gas into a crowd of at least 5,000 public employees demanding their past-due salaries. Menem's government



SCARY? A Peronist, Duhalde has worried investors by blaming the country's woes on the global economy

AMBIGUOUS: De la Rúa has raised eyebrows by criticizing the "absence of state" in Menem's tenure

backed down and said it would give the province \$55 million to pay its workers. The same day, riot police blocked 300 schoolteachers from setting up a protest camp outside the presidential offices in Buenos Aires. In May, the government had agreed to give teachers a \$100-per-month raise and introduced a vehicle tax to pay for it. But when 270,000 truckers went on strike in July to protest the tax, Menem postponed it.

With industrial activity down 14% from last year, business leaders are also becoming impatient. Auto makers, whose output is down 48% in the same period, are asking for lower taxes to make their products more competitive. Horacio Losoviz, president of the national auto makers' association and the local subsidiary of truckmaker Iveco, estimates that taxes account for 40% of the average car's sticker price.

The growing restlessness—under-

scored by a rising wave of violent crime in Buenos Aires—raises the question of whether Argentina will stick with the currency board. The system is criticized with slashing interest rates to zero, but it becomes a scapegoat in times of crisis. The rigid monetary policy has come under increasing scrutiny since Brazil's devaluation, which made Argentine products less competitive at home and abroad. "Main Street was not prepared itself for this," says Pedro Lacoste, who runs a Buenos Aires economics think tank bearing his name. "People don't understand why there is no money and no jobs."

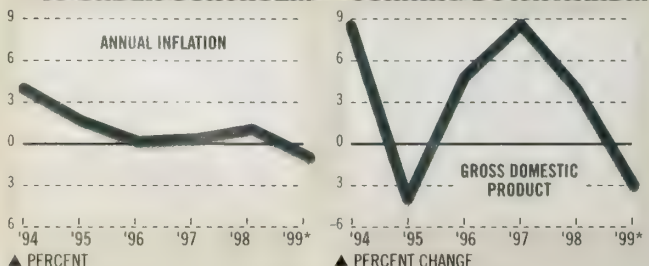
Neither Menem's government nor the next one will be in a position to appeal to Argentines. Some analysts believe the budget deficit

could reach \$7 billion this year, 2.3% of gross domestic product. That's not alarming by world standards, but it is deeply troubling for Argentina, whose country's credibility in the market hinges on fiscal discipline.

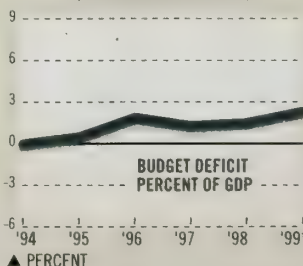
In Menem's first term, it seemed Argentina could do no wrong. After taking office in 1989, he privatized nearly all money-losing state-run companies, bringing \$14 billion into the government coffers in four years. In 1991, he imposed the currency board, which slashed annual inflation from 20,000% to 4% in four years. He opened up the economy by cutting average trade tariffs from 35% to less than 20% and eliminating restrictions on foreign investment.

When Menem easily won reelection in 1995, economists were hoping for an ambitious "second wave" of structural changes. Their goal would be to make Argentina a more competitive economy.

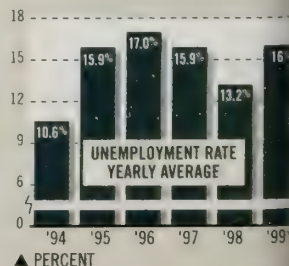
ARGENTINA'S INFLATION ...BUT THE ECONOMY IS UNDER CONTROL... IS TURNING DOWNWARD...



...ADDING TO THE DEFICIT...



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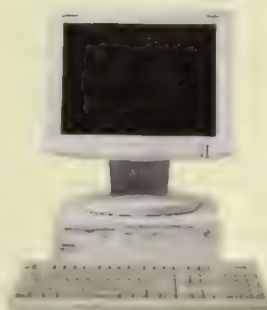
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"Main Street has not prepared itself for this. People don't understand why there is no money and no jobs"

and put it on a course for sustained high growth. Investors hoped that the new wave of reforms would include loosening Argentina's inflexible labor laws, simplifying the tax system, overhauling the health-care system, and restructuring finances in the provinces.

HIGH-VAT DIET. But Menem, who until earlier this year considered asking courts to change Argentina's election rules to allow him to run for a third term,

in 1978, is operating its newest plant, in the central city of Rosario, at a paltry 30% of capacity. GM has had to trim its workforce from 2,100 in September, 1998, to 1,400 today. The decline in domestic demand plus the devaluation in Brazil has been "a double whammy" for the auto industry, says Basil Drossos, president of GM in Argentina. "The overall tax structure is becoming onerous," he adds.



backed off when faced with the prospect of confronting labor leaders and the provinces' woes. "The reforms Menem directed before 1993 were among the deepest in the world," says Jorge Avila, an economist with the University of the Center of Macroeconomic Studies in Buenos Aires. "But almost nothing has been accomplished in his second term."

The unfinished agenda clearly takes a toll on millions of Argentines. The rigid labor laws burden businesses with hefty severance and tax payments and make it cumbersome for employers to hire part-time workers. Greater labor flexibility could help reduce Argentina's unemployment rate, which has hovered in the mid- to high teens for five years.

For businesses, the lack of progress on tax reform has been a big setback. The government hits Argentine companies with an array of levies from a tax on corporate debt to a 21% value-added tax. The VAT is killing consumption of big-ticket items. General Motors Corp., which returned to Argentina five years ago after leaving the country

Industry's woes are provoking friction with Brazil. Since Brazil's devaluation, Argentine exports to its northern neighbor are down 30%.

The slump has pushed Brazil's exports to Argentina down by more than 20%. It's the first time since the two nations opened the Mercosur trade bloc in 1991 that total trade has declined. To reduce trade volatility caused by devaluations, Menem supports a common Mercosur currency or adoption of the U.S. dollar by Argentina. But neither Duhalde nor de la Rúa has voiced enthusiasm for dollarization, and both say they will stick with the currency board.

The political transition is still making both Argentines and foreigners nervous. Duhalde, 57, who is trailing de la Rúa by 13 points in opinion polls, has unsettled investors by blaming many of Argentina's woes on the global economy. De la Rúa has raised eyebrows by

HURTING: Car-repair shop owner Giro has had to cut prices 40% over the past four years

vaguely criticizing the "absence of order" during Menem's two terms.

De la Rúa, 62, is a somber, avuncular man who appeals to the many who see Menem's government as ruthless and corrupt. Despite his ambivalent remarks, de la Rúa has surrounded himself with economic advisers who believe in orthodox policies and strict budget controls. José Luis Machinea, a potential Economy Minister if de la Rúa is elected, favors allowing more competition in privatized sectors such as telecommunications to reduce the costs.

Investors are bracing for more surprises from Duhalde, who bills himself as a populist Peronist. Although he says he would not declare a debt moratorium, he suggests that the subject should be open for discussion. "Our economic situation is due to a foreign crisis"—the devaluation of the Brazilian real—he says. "Why should countries that make the necessary adjustments have to suffer?"

Duhalde and Menem, the symbolic leader of the Peronist party, had relations on unfriendly terms since Duhalde withdrew sufficient support to squash Menem's hopes of running for a third term. But after avoiding the issue for weeks, on Aug. 2, Menem announced that he would back Duhalde. Nevertheless, Duhalde's best hope for the presidency could be an alliance with former Economy Minister Domingo Cavallo, who stalled the currency board and is widely regarded as the father of economic stability in Argentina.

Cavallo is now campaigning for president under his fledgling Action for the Republic party but is trailing with 10% in opinion polls. Cavallo's support would become crucial if the two leaders face a runoff. To win in the first round, a candidate must receive at least 40% with a margin of 10 percentage points over the second-place finisher.

Few analysts expect the next government to do anything bold. Economist Avila believes that de la Rúa will win, in part because voters are fed up with the Peronists. But don't expect any daring measures, he adds. It doesn't bode well for Argentina's term prospects. Even if the country averts a meltdown, it has wasted an opportunity to move forward.

By Ian Katz and Beth Rubenstein Keaveny in Buenos Aires



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is that it only comes one day at a time.*

—Abraham Lincoln

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THE METHOD TO YELTSIN'S MADNESS

Russian President Boris N. Yeltsin is predictably unpredictable. But his decision on Aug. 9 to fire Prime Minister Sergei Stepashin, the fourth Russian Prime Minister to get the ax in 17 months, smacks of desperation. In Stepashin's place, Yeltsin nominated Vladimir V. Putin, chief of the Federal Security Service, successor of the KGB. Yeltsin also anointed Putin as his preferred successor as President.

Yeltsin's erratic decision-making is driven by two somewhat contradictory desires. He wants to preserve his legacy as the man who brought democracy to Russia and preside over the first-ever transition of power through the ballot box when Russians elect a new President in July, 2000. But he also wants to make sure his own man wins.

Insiders say Yeltsin thinks it's his right to tell voters which candidate he believes can carry on Russia's political and economic transformation. He has had several favorites, the most recent being Stepashin. But the President grew disappointed when Stepashin failed to counter the growing influence of Yeltsin's opponents. So he chose Putin. "In the mind of Yeltsin, he is a czar, and his choice should be enough for the voters," says a former Yeltsin aide.

But Yeltsin may have other, darker worries motivating him as well. He and his aides may face corruption allegations or political revenge if Kremlin rivals win the next election. Indeed, Yeltsin fired Prime Minister Yevgeny M. Primakov in May, shortly after he launched corruption investigations into Kremlin insiders such as financier Boris Berezovsky. Now, Swiss prosecutors are investigating 23 former and current Kremlin staffers on money-laundering and corruption charges.

THREATENING ALLIANCE. Yeltsin fired Stepashin and elevated Putin after Moscow Mayor Yuri M. Luzhkov—a likely presidential candidate—allied with a party backed by 10 regional leaders. The new alliance, called Fatherland-All Russia, is expected to sweep parliamentary elections scheduled for Dec. 19. If the group can woo Primakov to its ranks, it could also win next year's presidential race.

Yeltsin doesn't trust either Primakov or Luzhkov, insiders say, even though they both generally back the free-market reforms that he launched. Although Yeltsin is a champion of

democracy, he also comes from Russia's long tradition of powerful leaders. His political instinct is to fight any opponent who competes with the Kremlin. And Yeltsin has often declared that Russia's future belongs in the hands of a younger generation—not his contemporaries.

Although a political nonentity, Putin emerged as Yeltsin's favorite to beat Luzhkov and Primakov because of his experiences as both a spy and an administrator. Among Kremlin insiders, Putin is considered tougher than Stepashin, who expressed distaste for political dirt and failed to challenge Luzhkov's rising star. Putin, 46, was a KGB agent in East Germany, mostly in Leipzig, for 15 years, then allied himself

with reformers in St. Petersburg in the late 1990s. In 1996, he moved to Moscow as Yeltsin's deputy chief of staff, handling relations with Russia's 89 regions. Under Stepashin, he has a personal relationship with many governors, including doling out federal funds to them.

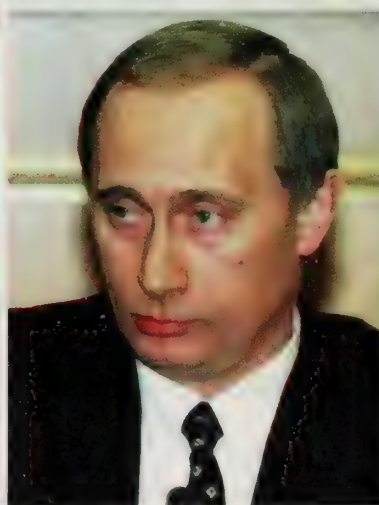
That's important because Russia's government could become kingmaker in the presidential election. They not only control government but often control much of the media and the biggest businesses in their regions. So they can easily swing elections. More than 60 local leaders have yet to ally themselves with a political

party or a presidential contender. They've been waiting for the Kremlin to make its move. That gives Putin a room to maneuver. "The real drama is going to start after December elections" for parliament, says Mark Urman, a strategist with the centrist Our Home is Russia party.

Kremlin insiders believe Putin can go on to win the presidency thanks to their control of key media groups and readiness to spend liberally on the campaign. That worked for Yeltsin when he was reelected in 1996. But Putin isn't Yeltsin. He's used to operating behind the scenes and lacks charisma. He also faces big problems, not least a war breaking out with Islamic separatists in Dagestan.

At this point, few outside the Kremlin believe Putin can build up a national profile ahead of next July's election. In Russian politics, a year is an eternity. Putin may surprise his compatriots—or Yeltsin could always fire one more Prime Minister.

By Margaret Coker in Moscow



SURVIVAL INSTINCTS Putin, an ex-KGB agent, is expected to be tough with potential political rivals and—if he is elected President—cover Yeltsin's back by quashing any corruption probes

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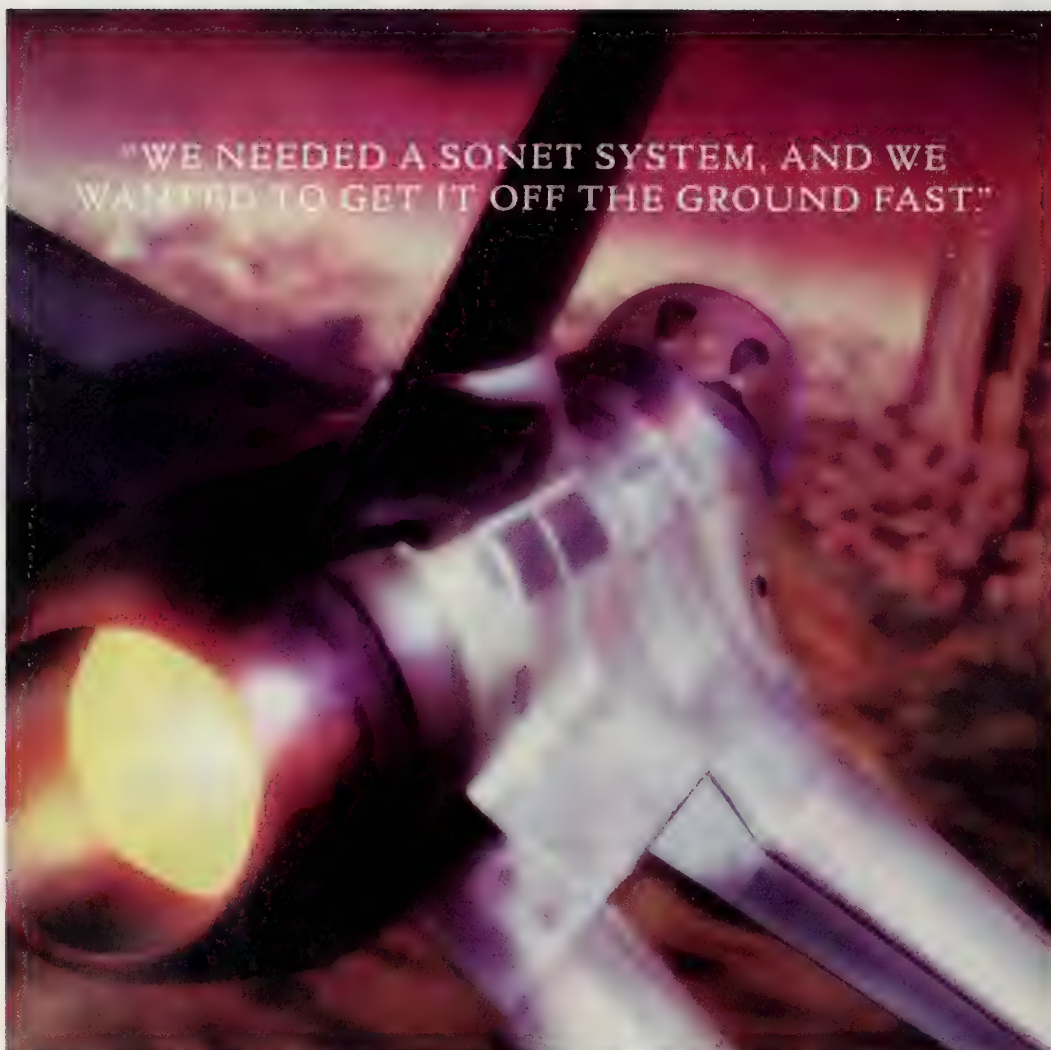
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THE HOTTEST PROPERTY IN THE VALLEY?

In the end, Hewlett-Packard didn't make Ann Livermore CEO—but someone else might



In the spring of 1998, with Hewlett-Packard Co. stuck in one of the deepest funks of its 60-year history, the company's top executives decided to put themselves through a so-called 60-degree evaluation in which they would open themselves up to criticism from employees, peers, and board members. That's when Ann M. Livermore, head of HP's \$5 billion software and services business, discovered something about herself. "I learned that I am a very, very well-controlled executive, that my employees like when I don't handle every once in a while. You know, show my human side," Livermore says. "It reinforced that leadership means touching people's hearts as well as their brains—so since then I

centralized structure of warring tribes to create an "E-services" vision that finally put HP into the Net game alongside IBM and Sun Microsystems. And when HP CEO Lewis E. Platt announced in March that he would step down, Livermore shocked some colleagues by confirming that she wanted the job.

If judged unseemly by some, Livermore's approach almost worked. Insiders say Livermore was the only internal candidate who made the short list. And after HP made history on July 19 by making former Lucent Technologies executive Carleton S. Fiorina the first female CEO of a Dow 30 company, HP board members and executives went out of their way to point out that Livermore was a finalist. "Ann and her team deserve huge credit," says Fiorina, who met with Livermore for four hours on the weekend she was named CEO.

MIFFED COLLEAGUES. Now, Livermore stands out as a hot property for headhunters seeking to fill the 200-plus CEO spots now open in Silicon Valley. "If nothing else, she's made herself a much better candidate to be CEO elsewhere," says Bain & Co. consultant Vernon E. Altman. "Coming in second doesn't hurt her internally, and companies who had never heard of Ann Livermore will now consider her for CEO." But rather than

Livermore broke through a rabble of warring tribes at HP, organizing a frantic catch-up effort that made it a serious Internet player

haven't worried so much about keeping my lid on."

That's for sure. In the past year, Livermore has evolved from a cautious practitioner of HP's consensus-oriented management into a lightning rod for change at Silicon Valley's granddaddy of technology companies. It was she who finally got HP into gear on the Internet. After years of fragmented efforts, she broke through HP's highly de-

centralized structure of warring tribes to create an "E-services" vision that finally put HP into the Net game alongside IBM and Sun Microsystems. And when HP CEO Lewis E. Platt announced in March that he would step down, Livermore shocked some colleagues by confirming that she wanted the job.

So who is Livermore? To many, she remains an enigma—either a managerial



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Livermore's fast rise left some colleagues feeling that she had not been anywhere long enough to really prove herself

diamond in the rough who has toiled in relative obscurity at HP or an opportunistic operative who parlayed her candidacy for CEO to reposition herself as the latest Internet whiz. The answer? She's somewhere in the middle. She never ran a Net business until last November. And while the \$5 billion software and services division she oversaw before that outpaced the growth of HP's slumping hardware units, it's still seen as an underachiever. Some analysts say that Livermore managed it too cautiously. Rather than capitalize on the consulting bonanza that has made IBM Global Services a \$29 billion gold mine, she failed to overcome HP's habit of tying services to its hardware. The result: Service revenues of just \$6.6 billion in 1998.

That's why her rapid rise has left some of her peers miffed. For starters, Livermore, who got her first profit-and-loss responsibility in 1996, hasn't had a chance to prove she can deliver sustainable results, since she has been promoted annually. "She never even got a chance to put her stamp on an organization," says an HP executive. And some are frustrated by the fact that Livermore, after years of toeing the HP line, is now making hay as a rebel to the HP way. "I would not call Ann a glass-breaker, which is what HP has needed for a long time," says the HP executive. **"TONED DOWN."** But Livermore is only now beginning to show what she can do as an executive. Never mind her prematurely graying hair, plain-Jane wardrobe, and pragmatic ways—all of which make her almost an alter ego to the charismatic Fiorina, who stood out at Lucent for her take-no-prisoners sales tactics and her ability to build Lucent's brand, not to mention her stylish Armani suits. Close associates say there's far more to Livermore than the image she projects. "She has been very toned down" because she thought it fit with HP's egalitarian culture, says Calico Commerce Vice-President Amanda North, who roomed with Livermore while at Stanford business school. "But she's a lot more dynamic than most people give her credit for."

Livermore's drive surfaced early. While raised to be the perfect Southern lady, by 12 she had persuaded her father to teach her to drive—there's still car paint on the pole of a basketball hoop near his home in Greensboro, N.C.,

to prove it. Despite childhood diabetes, she became a tennis doubles champion and was captain of her high school basketball team. A brilliant student, she won a prestigious Jim Motley Morehead scholarship before attending the University of North Carolina at Chapel Hill and then Stanford business school. "She's always been a go-getter," says older sister Jane Martinelli, a lawyer in Raleigh, N.C. During the family's one-week reunion at a North Carolina beach in early August with her husband, Tom, and nine-year-old daughter, Livermore devoured four novels. "There's even competition when it comes to leisure reading," laughs Martinelli.

Nor is Livermore always the pragmatist she appears to be. As a teen, she repeatedly tempted fate with high-risk ad-

ventures—like hang-gliding without parents' permission. After an out-of-control leadership program, she returned to native Greensboro with hair-raising tales of rappelling down mountains.

That same gutsy nature made her a rising star at HP. By coupling her Southern charm with a willingness to make tough decisions, she helped HP increase its software and services business over two years. James L. Arthur



Ann Martinelli Livermore

BORN Aug. 23, 1958

CHILDHOOD Grew up in Greensboro, N.C., where she was a standout in tennis and the captain of the basketball team—despite her 5-foot, 4-inch height. While her father worked his entire career for a local insurance company, she never dreamed of staying at one company.

EDUCATION BA in economics from University of North Carolina at Chapel Hill, 1980; MBA from Stanford University in 1982.

CAREER HIGHLIGHTS Joined HP in 1982. Worked her way up through its computer-services division, a backwater in hardware-minded HP. Became head of the division in 1996. After helping devise HP's first Internet strategy, promoted in November to CEO of the company's \$14 billion Enterprise Computing division.

FIRST BUSINESS SUCCESS At Stanford, teamed with a friend to write a business plan that won the annual competition to run the

coffee and doughnut concession. The \$50,000 she earned paid tuition—and changed Stanford's approach. After that, professors were hired to tap the profit potential Livermore helped uncover.

HOW SHE FEELS ABOUT NOT BEING NAMED CEO OF HP

"I wouldn't be very human if I was disappointed. But [new CEO Carly Fiorina] is going to be a great boss. My intention is to stay at HP. I'm sitting at a computer company that's poised to write the second chapter of the Internet, so I feel like I'm pretty well-placed."

WHAT SHE ALWAYS WANTED TO BE

A singer, though her karaoke skills are "awful." When HP mentor Jim Arthur retired, Livermore and a colleague, clad in short skirts and feather boas, rented a recording studio to make a video of a song they made up, "We've lost that Arthur Feeling." Says Livermore: "I had to have a lot to drink before I did that on

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People

former services chief, says she avoided getting bogged down by "terminal niceness"—a common HP affliction that prevents fast decision-making. "She just makes things happen," says Arthur.

By 1998, however, Livermore was frustrated with HP's mediocre performance and decided to push for big changes in the company's time-worn structure. "She felt that if we didn't do

anything [on the Net], we'd end the century in a very weak position," says Nick Earle, head of marketing for her unit.

That's when the bold side of Livermore reemerged. She led an effort to break from the decentralized structure to create one organization that would drive a Net plan. "I felt we could be the most powerful company in the industry if we could get our hardware, software, and

she quickly pulled together the services strategy. The idea is that in the future, more corporate customers will want to outsource computer operations to companies like HP and its partners who can manage complex applications and Web sites for them. And instead of charge customers for computer and related technology, Livermore thinks as much as 80% of HP's enterprise revenues could one day come in the form of monthly service fees—much like utility bills—paid for the outsourcing. "An electric utility doesn't get paid for its power plants—and they cost more than computers," she says.

FIGHTING WORDS. By mid-February, she put E-services into overdrive. On Feb. 17, she spelled out the significance in a memo to her 44,000-person unit: "We need to focus," she wrote. "But it implies discipline and a willingness to make tough choices. That means some people's favorite projects may be realigned or redirected." That meant tepid stuff in harder-edged competition but they were fighting words at HP.

Livermore rapidly moved beyond an organizational makeover. She set the go-ahead on a \$1 billion-plus spending spree to fill in the technical holes in

THE BIG PUSH

Livermore and Nick Earle, her marketing chief, envision HP as selling services as much as computers

services aligned," she says. By last November, with a rudimentary plan on paper, Platt agreed to put Livermore in charge of the overall enterprise division, which includes server computers, services, and software.

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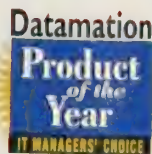
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BREAKING THE PLASTIC

o. Within months, her unit made investments in E-banking software company Security First Technology. It also struck an innovative deal with electronic marketplace Ariba.com.

ING ORDERS. To make deals happen on the Internet time, she began "time-chasing" them—that is, setting dates by which a deal had to be done. When talks to provide Web application host Communications with \$500 million of equipment in exchange for a cut of the Internet service billings, she laid out a law for the negotiating team: "No time during our negotiations do I want to get a call that we're moving forward." It worked. HP landed a deal that would bring in \$1 billion in revenues over the next three years. So far so good. While HP's stock has jumped 50%, it's since March on surging printer sales, E-services could bump it to \$90 billion in short order, says Salomon Smith Barney analyst John B. McElroy. That hinges, however, on execution and whether she can pull together technologies from inside HP and its partners. These technologies range from information appliances to software that helps customers to suppliers.

Bolstered by such successes—and by a shortage of other internal candidates—Livermore's name was already being considered to replace Platt when the search started in earnest last spring. And when she publicly confirmed that fact, something other HP execs declined to do, the rumor mill began to focus on her. While some accuse her of unseemly ambition, she did little else than ex-

On not becoming CEO: "I wouldn't be very human if I wasn't disappointed"

press her interest in the job when the press asked. "My objective was to position HP as a leader in the Internet space," she says. "But all anyone wanted to talk about was the CEO search."

Some say Livermore might have been HP's new CEO if she'd been at her current post longer than just eight months. That knowledge made Fiorina's appointment tough for Livermore to swal-

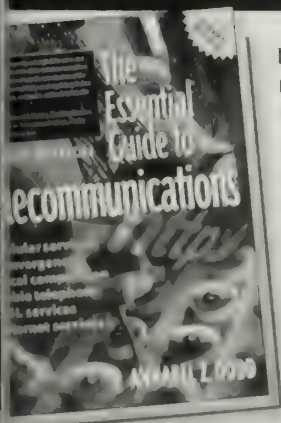
low, say friends. "Of course I'm disappointed," she told *BUSINESS WEEK* on the day HP announced Fiorina's selection. "I wouldn't be very human if I wasn't disappointed." And at the family reunion, Livermore made it clear she wanted gin rummy, miniature golf, and fried seafood more than talk of HP politics. "I got the message right at the start that we were there to have a vacation and there wasn't going to be any business talk," says her father.

What's Livermore likely to do? Insiders say Fiorina wants her to stay and is renegotiating her contract. And Livermore says she's thrilled to work for Fiorina. "She's a great leader, and my initial impression is that I'm going to learn a lot," says Livermore. Still, don't expect her to stick around long. Since Fiorina is only five years older, it's unlikely Livermore will ever get another shot at HP's top job. "If she was offered the right position, I think she might go for it," says North. "She came so close that she could taste it."

For all the questions around high-tech's newest superstar, one thing is for sure: She'll get plenty of opportunities to leave HP.

By Peter Burrows in Palo Alto, Calif.

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Annabel Z. Dodd is a faculty member of Northeastern University's State-of-the-Art program and a former marketing manager at Bell Atlantic.



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21 ideas for the

21st century

INTRODUCTION | **1** ENERGY | **2** NATIONALISM
3 MANAGEMENT | **4** NANOTECH | **5** TIME | **6**
RELIGION | **7** HUMANITY | **8** ENVIRONMENT
9 COMMUNICATIONS | **10** CITIES | **11** BIOL-
OGY | **12** ARTIFICIAL INTELLIGENCE | **13** HEALTH
14 INTERNET | **15** MONEY | **16** DEMO-
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When Neil Armstrong walked on the moon in 1969, Mrs. seemed to be just a space shot away. But forecasters who saw the moon as a springboard for colonies on the Red Planet and voyages to the stars were mistaken—even moon walks are off the agenda. In fact, for the rest of the world born after the last Apollo mission, walking on the moon belongs to history, along with Roald Amundsen's trek to the South Pole in 1911.

Like the Space Age enthusiasts of 30 years ago, forecasters who extrapolate from today inevitably get tomorrow wrong. In 1929, just before the Great Depression, Yale University economist Irving Fisher said stock prices had reached "what looks like a permanently high plateau." In 1933, economists lined up at the gas pump were sure that oil prices were headed for \$100 a barrel by 1980. The figure today is \$21.

So on the eve of the millennium, when everyone is drawing lines on graphs to see where the world is headed, BUSINESS WEEK cut loose and went nonlinear. In this summer special report, you won't find any tables predicting Internet usage in 2020, mortality rates in 2030, or per capita income in 2040.

Instead, we have compiled "21 doors for the 21st Century." It's a set of propositions, concepts, and visions that are in no particular rank. Although we use the language of prediction, the real intent is simply to put a lot of ideas on the table. From meditations on empty forests to extremophiles to the outlook for the sprawl and the immortality of the mind, we opened our sights extra wide. The headlines say it: "The earth is on an electronic skin" (page 132). "Portraits on the fringe hold secrets of the future" (page 114).

The notion underpinning this special report—let's call it the 22nd idea—is to pit multiple scenarios of the future against one another and to keep many different doors open, so you can prepare yourself for a future that is inherently unpredictable. The storming pays off. And the more

INTRODUCTION

We are offering 21 doors to the future and invite you to explore

by Peter Coy and Neil Gross

possibilities you can entertain, the less likely you are to be blindsided.

Some of the possibilities are entertaining indeed. Try this one on for size: A world in which you could download from the Internet the "recipe" for a cell phone, to be assembled at home in an oven-size device called a nanobox. Such boxes would radically reshape the manufacturing sector of the economy. That's one of the 21 ideas in this package (page 90).

How about computers that utilize bizarre quantum effects to solve problems with the equivalent of a roll of the dice (page 160)? Or this: Should you drum math and science into your kid's resisting brain when, in a mere 20 years, she will be fitted with embedded chips that make her far smarter than Stephen Hawking, or be able to pop a pill to achieve the ►

As humans, we're tempted to embrace a likely scenario and stick to it. But in these volatile times, the smart idea is to pursue multiple paths and not be afraid to change direction

same effect? (gatefold after page 116).

These 21 ideas are not all high-percentage shots. There may never be 2,000 nations, as we speculate (page 86). High schools may not wither away after all. Giant utilities may remain the energy suppliers of choice (page 84). And after experimenting with management by teams (page 88), leaderless corporations may decide that what they really want are iron-fisted CEOs.

Even our tone—generally upbeat—could be off. BT Laboratories Futurologist Ian Pearson, usually a technology cheerleader, has a comical rendition of high technology run amok: It's a world in which people on telephones try to make customer representatives angry because it's the only way to tell that they're people and not computers. "The fridge has time locks on the door and a video camera watching what you take out," he writes on the British telephone company's Web site. "It won't allow the microwave to cook it because it contains too many calories. Kitchen rage is becoming a major social problem."

O.K., let's say you have a thousand disparate visions of the future jangling in your mind—for your family, your career, the company you run. The temptation is to fix on one plausible scenario and run with it. Don't. Smart managers acknowledge their own myopia. They pursue several paths at once, knowing that some won't pay off. They fund research projects aimed at exploiting mutually exclusive visions of the future. They're willing to be wrong frequently, and quit when they're behind.

The more unsettled things are and the faster they change, the more valuable it is to keep multiple options alive. "Volatility is not your enemy," says John H. Holland, computer scientist and thinker at the University of Michigan and the Santa Fe Institute. English essayist Francis Bacon figured this out nearly 400 years ago. "If a man will begin with certainties, he shall

end in doubts," he wrote. "But if he will be content to begin with doubts, he shall end in certainties."

For investors, too, scenario planning can be illuminating. The Internet may be the single dominant theme in stock investing today. But tomorrow's hot trends could be in the biosciences, nanotechnology, or—who knows?—industrial enzymes derived from life on Mars (page 114).

Building scenarios and managing multiplicity can be a tough exercise. People crave certainty and hate revisiting decisions. That's why companies so often throw good money after bad and fire people who abandon a project—even when giving up is the right thing to do. But in the 21st century, we'll all have to emulate a football player returning a kickoff. He revises decisions second by second, cutting back and forth across the field in search of daylight, unembarrassed that he had to reverse field when circumstances changed.

The eve of the year 2000 is a good time to think about reversing field. True, you could argue that the next century and millennium really do begin until 2001. But the calendar we live by is a social artifact anyway. A thousand years ago, most of the world cared nothing for the Western calendar. And one thousand years from now, most people aren't even living on this planet, the notion of an earth year seems antique.

We're not looking 1,000 years ahead. But we are daring to look 100 years ahead, peering into a future that appears fuzzy and flickering, like the first shots of Neil Armstrong on the moon. Our rationale: If you envision multiple versions of the future and think through their implications, you will be better prepared for whatever ends are happening. In effect, you won't be seeing the future for the first time. You'll be remembering it. The alternative won't cut it: Those who cannot remember the future are condemned to be taken by surprise.

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1

I am your local power plant.**ENERGY** by LARRY ARMSTRONG

As of this summer (it's 2009), I have two electric meters: "in" and "out." The "in" meter runs most of the time. But once in a while, when power is scarce and expensive, a little generator in my cellar comes on. It keeps everything in the house humming; excess electricity gets sold to the grid. I love watching that "out" meter whirl.

Personal power plants have come a long way from the 20th century, when they mostly made a racket on

**MOST EVERYBODY'S
GOT A PERSONAL
TURBINE IN THE 21ST
CENTURY.
THEY CAN RUN ON
PALM OIL OR MANURE
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AND IF THERE'S
EXCESS
JUICE, YOU CAN
SELL IT BACK TO
THE GRID**

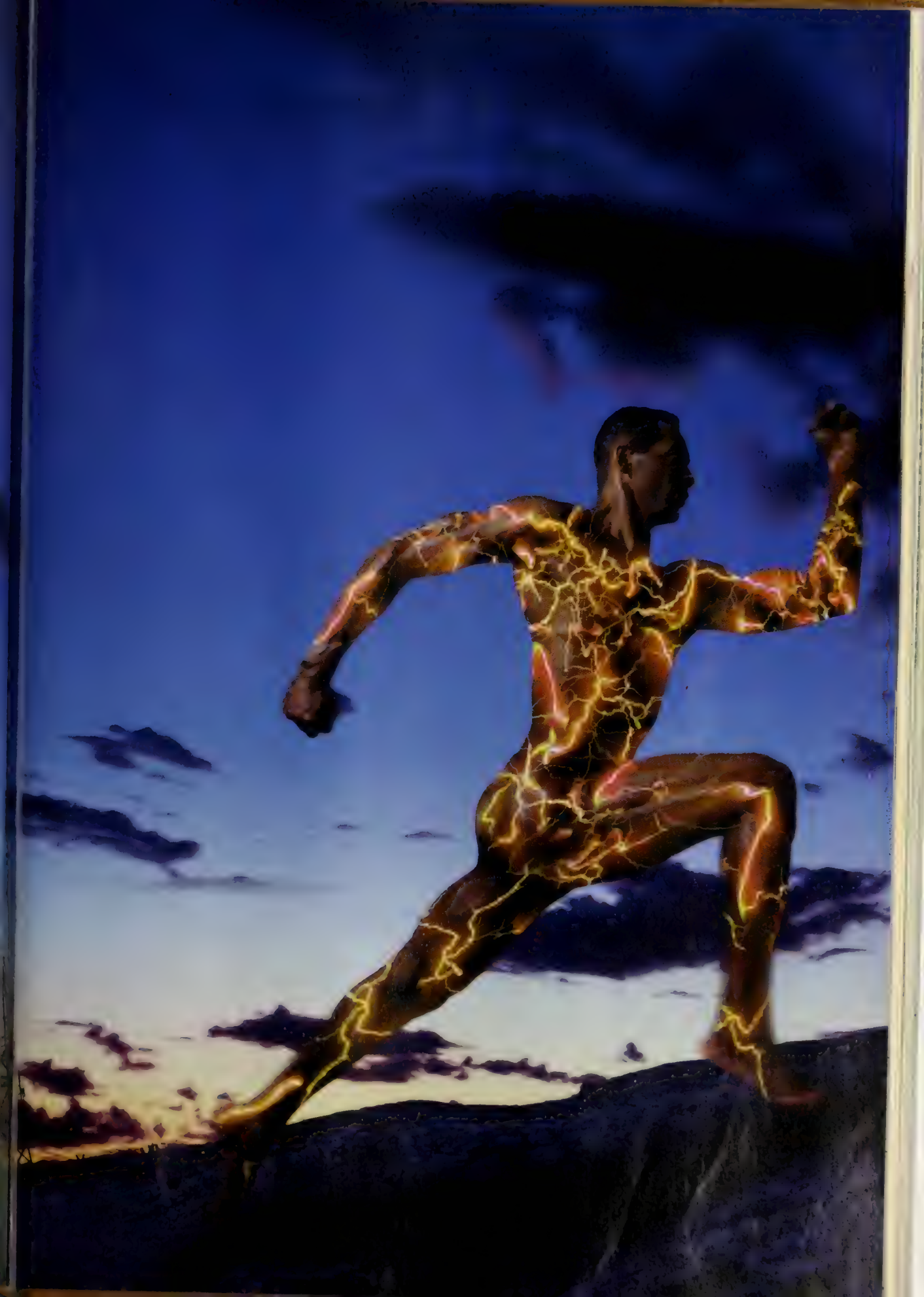
camping trips. Now, they're everywhere, purring like kittens. Sure, there are still big central generating plants, just as there are big mainframe computers. But the hot trend is "distributed generation"—putting generation close to consumption. That way, the utilities can dismantle their nuclear- and coal-fired plants, and there's no need to tear up the streets to replace power distribution cables.

Check out this baby. It's a microturbine. Runs on natural gas, which is still cheap in the U.S. Other models burn stuff like palm oil and manure gas. You can also get fuel cells, which produce electricity by turning hydrogen and oxygen into water, but they're still pretty expensive. My first power generator ran on gasoline. It was under the hood of my hybrid car. If we had a blackout, I could actually plug the house into the car to keep the lights on and the refrigerator running. I've always been this way: I once had a laptop computer that helped recharge itself by capturing energy from my keystrokes.

Today, my personal power plant takes over automatically whenever there's a power failure or a big price spike. I signed up for so-called marginal cost power, which is super-cheap most of the time but gets astronomical during peak periods—like hot summer days. Remember when you could get a discount if you let the utility remotely turn off your air conditioning for a couple hours? Now, it can remotely switch on my generator when it needs an extra punch.

I'm thinking about adding solar panels to my roof, which will make me a net seller of power. But that's as far as I'll go. My neighbor tried to earn a few extra bucks by wiring his exercise bike into the grid, and the old-timers around here came up with a nickname for him: "Reddy Kilowatt."





2

Should Kurdistan be a nation? Scotland? How about New York City?

NATIONALISM

by STEPHEN BARR



Indian women pass by a satellite dish near New Delhi: While technology speeds global communication, local loyalties intensify

**TWO FORCES THAT
WERE SUPPOSED TO
UNIFY THE WORLD ARE
ACTUALLY HELPING
NATIONS TO SPLINTER:
THE INTERNET AND
THE GLOBAL ECONOMY**

In 1950, there were 58 nations in the U.N. Today, there are 185. If that rate of proliferation continues for another century, the U.N. and its successor will have nearly 2,000 members. Imagine some of the new governments, replete with flags, anthems, national birds, and Olympic bobsledders: Scotland. Québec. Palestine. Kosovo. Tibet. Kashmir. South Ossetia. Kurdistan. Timor. Biafra. New York City.

Countries are fractured into new nations by two global forces that were supposed to pull everyone together: the Internet and the global economy. The Net, often seen as a force for universalism, actually makes nationalism easier to express and share. Basque or Quebec Web pages abound, concentrating the power of breakaway elements

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At the same time, the globalization of the economy enables small fry to go it alone. With open trade, countries with something valuable to sell can break away from bigger neighbors and support themselves. They don't even need their own money supplies. Even old-time powers like France and Germany are dropping their national currencies. And with regional security umbrellas, small countries needn't bother with their own armed forces.

If the Basques of northern Spain won independence, for instance, they would promptly file for membership in the European Union, adopt the euro as a currency, and maintain virtually open borders with neighboring Spain and France. Little would change. In fact, the clamor for independence is intensifying. Already, the Basque language, after being suppressed by dictator Francisco Franco, is flourishing.

NEW BALKANS. The problem is that Spain won't let them go. If the Basques are allowed to break off, the Spanish government argues, then the Catalonians (centered in Barcelona) and the Galicians will want out, too. Suddenly, Spain could be torn from top to bottom by ethnic rivalries.

Too often in the 21st century, the birth of nations will be violent. The same welling up of nationalism that gives rise to new countries also produces a reaction from mother countries that don't want to give up parts of themselves. China refuses to cede Taiwan. Israel hangs on to the West Bank, Indonesia to East Timor. Imagine the horror of Yugoslavia's breakup repeated over and over in the century to come. If

every would-be nation in the world were to assert independence, the bloodbath would be "unimaginable," says Brown University international relations professor David Friedman, author of *The Way of the World: From the Dawn of Civilizations to the Eve of the 21st Century*.

All this talk of blood and soil seems irrelevant to trotting multinationalists, whose world revolves around conference tables, laptop computers, frequent-flier miles, stock options. These globalists speak the cool, rational language of money. But such people are in the minority. Nationalists, like Yugoslavia's Slobodan Milosevic, speak ancient loyalties and grievances, and theirs is the language that stirs the blood among people whose allegiances are ancient and tribal.

It may be possible to accommodate nationalistic fervor in a relatively civilized fashion. Great Britain, for instance, granted a form of home rule to the Scots and Welsh without undue trauma. But even in Britain, there are fears that the effect of the semisplit will be to isolate Scotland and pull it from the world economy.

The risk is that as advanced information societies such as the U.S. and Western Europe form transnational confederations, regions that are left out of the confederations will move in the opposite direction. They may become even more nationalistic, more torn by violence. The poor nations of the world could break, like vases on the floor, into thousands of pieces.

3

The global corporation becomes the leaderless corporation

MANAGEMENT

by JOHN A. BYRNE

**THE TRAILBLAZING
CORPORATE SUPERSTAR
WILL BECOME A THING
OF THE PAST. AND
FOLLOW-THE-LEADER IS
A GAME COMPANIES WILL
NO LONGER PLAY. THE
PATH TO SUCCESS WILL
BE PAVED BY TEAMS
MADE UP OF THE BEST
AND THE BRIGHTEST,
WITH THEIR EGOS
CHECKED AT THE DOOR**

We are all angels with only one wing.
We can only fly while embracing each other.

—Luciano de Crescenzo

The 20th century Italian poet's metaphor wasn't about the 21st century corporation, but it might as well have been. The coming century will be unfriendly to superhero CEOs who try to wing their companies heavenward by sheer force of will. Success will belong to companies that are leaderless—or, to be more precise, companies whose leadership

is so widely shared that they resemble beehives, ant colonies, or schools of fish.

Today, democratic decision-making in corporations is still confined largely to factory floors and new-product laboratories, far from the top of organizational pyramids. That is hardly surprising. In a nation that loves superheroes, people cling to

the myth of what management guru Warren Bennis calls "the triumphant individual." The media celebrate CEOs as larger-than-life individuals who single-handedly communicate a vision and lead the way, earning millions for themselves in the process.

Cool the hero worship. In the 20th century, the Soviet Union collapsed because its

command-and-control economy couldn't keep up with the West's free market. In the 21st century, the same fate will befall companies whose CEOs attempt to control everything. In a world that is becoming ever more chaotic and dependent on brainpower, teams at the front will make more sense than single outrageously paid



CEO who sits behind a "buck stops here" plaque.

To see why, look to nature. You might assume a leaderless group of creatures would be ineffectual. Not at all. While one bee is merely a nuisance, a swarm is deadly. "You only have to look at biological systems to see that there are no big hierarchical stacks," says Peter Cochrane, head of research at BT Labs. "Everything is low and flat, very adaptable and very cruel."

The Internet allows companies to be more like beehives because information can be shared horizontally rather than funneled up to the CEO's office and back down again. "The nature of the process that built the Internet will inform everything that touches it. There's nobody in charge," says John Jordan, director of electronic commerce at Ernst & Young's Center for Business Innovation.

The beauty of such leveling is that decisions can be made instantly by the people best equipped to

make them. Might that produce corporate chaos? Sure. But that's not necessarily a bad thing. Uniform thinking enforced from the top can cripple an organization. Silicon Valley knows that well: When programmers try to debug a piece of software, they intentionally isolate themselves from their neighbors so they won't duplicate each other's mistakes. Says E&Y's Jordan: "When you debug, it's really good not to have the same assumptions and system as the guy next to you."

LOSING GROUND. In the 20th century, succeeding was like climbing the Rocky Mountains. It wasn't easy, but the path was obvious. Success was a matter of executing on a well-established business plan: Every step up brought you closer to the top. "Now, it turns out that the Rocky Mountains are fluid and moving," says BT's Cochrane. "One minute you're at the top, next you're in a valley."

Team leadership is ideally suited for this new reality. When the landscape is

changing daily, it's crucial to react fast—something bureaucratic, top-down organizations don't do well. "Most urgent projects require the coordinated contributions of many talented people working together. Whether the task is building a global business or discovering the mysteries of the human brain, it does not happen at the top," says Bennis, a University of Southern California professor and co-author of *Organizing Genius*.

Already, many companies are adopting work groups with no designated leader. In 1987, 28% of the largest 1,000 public companies boasted at least some self-directed groups. By 1996, 78% had some, according to research by Edward E. Lawlor III, head of USC's Center for Effective Organizations. The trend will only intensify as a generation of team-oriented managers climbs higher. Says Lawlor: "I can see future generations of people getting to the top with more team experience—and being more willing to use it

once they get there."

Some companies have already gotten a jump on the process. Even General Electric Co.'s take-charge CEO Jack Welch makes many decisions collegially with a team of top executives. "I couldn't do this job if I didn't have them," admits Welch. So John Chambers, CEO of Cisco Systems Inc.: "I learned a long time ago a team will always defeat an individual. And if you have a team of superstars, then you have a chance to create a dynasty." That's one reason Chambers has twice as many people reporting to him as does the average executive in his company: It forces him to empower those directly under him with greater autonomy, because he can't possibly keep up with the detail of their work.

In the 21st century, the all-powerful CEO may not be as powerful at all. Companies that thrive will be "led" by people who understand the business, as in nature, where one person can never really be in control.

4

Molecular machines aren't fantasy. Just ask the Pentagon

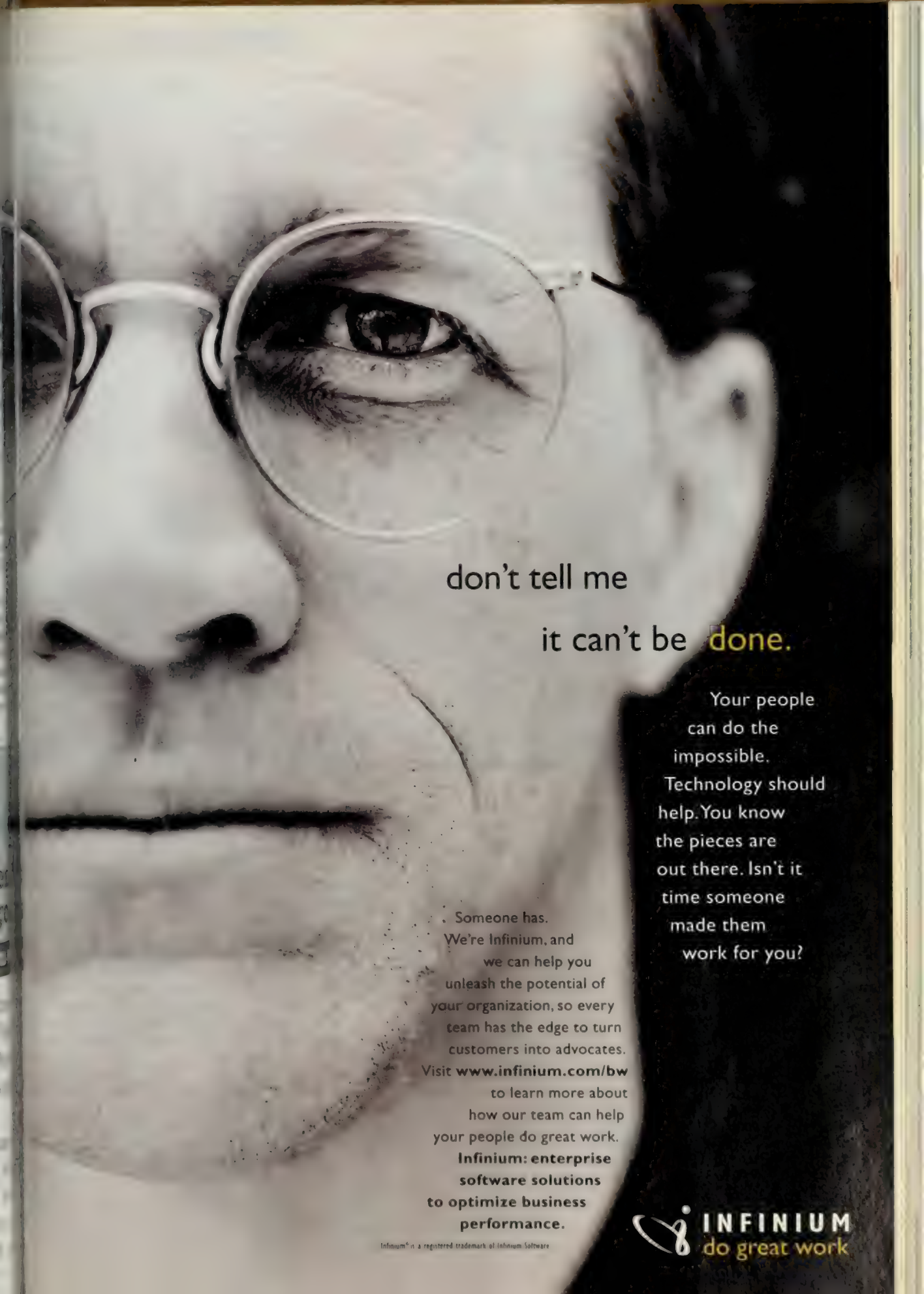
N A N O T E C H

by OTIS PO

**IN THE 2020s, YOU MAY
BE ABLE TO BUY A
"RECIPE" FOR A PC OVER
THE NET, INSERT PLASTIC
AND CONDUCTIVE
MOLECULES INTO YOUR
"NANOBOX," AND HAVE IT
SPIT OUT A COMPUTER**

Matter will become software. That's not a misprint: Matter will become software. As a result, we'll be able to use the Internet to download not just software but hardware, too. So predicts James Ellenbogen, the nanotechnology honcho at Mitre Corp., a Pentagon-funded research center in McLean, Va.

Nanotechnology is the craft of constructing things smaller than a hundred nanometers, or billionths of a meter. That's the span of a few scores of atoms strung together. Move automated assembly down to such scales, and the implications for manufacturing are pretty clear. Whole sectors of production could get clobbered. It could start



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it can't be **done.**

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the pieces are
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Molecular-scale robots will need molecular-scale muscles. K. Eric Drexler's design for a "fine-motion controller" (above) would enable a nanorobot arm to assemble parts atom by atom or to guide chemical reactions

with semiconductors in the 2010s, then spread to other small products, like cellular phones.

Ellenbogen makes a compelling case for his matter-as-software scenario. "Think about what happens when you download software today," he explains. "You're rearranging the material structure on your disk" by changing the magnetic properties of clumps of molecules. If the guts of computers were no larger than those clumps, you could rearrange molecules on the disk to build chips. Researchers are already busy developing techniques to make pinhead-size computers, "and the bits and pieces of these nanocomputers are far smaller than the physical structures we now manipulate to hold information on disk drives," Ellenbogen says. "So someday soon, we could download hardware from the Net just like we download software today."

New disk drives will be needed to physically reproduce some hardware downloads. One concept is to make a read/write head from a cluster of ultrasharp points to nudge atoms and molecules this way or that. Two groups—headed by Calvin F. Quate at Stanford University and Noel C. MacDonald at Cornell University—are working on that,

building on a decade of experiments using the tips of scanning-tunneling microscopes and related gear to move atoms around. The first such feat came in 1990, when Donald M. Eigler, a physicist at IBM's Almaden Research Center in San Jose, Calif., wrote on a nickel plate with 35 xenon atoms.

"Once we have the technology to build computers no bigger than grains of salt," Ellenbogen says, "we're in a fundamentally new ball game." Computers that tiny will be cheap, so they'll be everywhere. A computer in lingerie will tell the washing machine the water temperature should be. Ball pens will blink a warning when their ink gets low. Your shoes will let your car know you're approaching, so it can adjust the and mirrors and unlock the door.

COPY SHOP. But the grand slam in the nanotechnology software ballpark will be the nanocopy. This is a sort of futuristic copy machine that combines nanotech fabrication with today's so-called desktop-manufacturing methods used mainly to knock out quick prototypes of new products. If you want a new cell phone, you'll purchase a recipe on the Net. It will tell you to insert a sheet of plastic and some electrically conductive molecules into the "nanocopy" cartridge. The nanobox will pass the sheet back and forth, laying down patterns of molecules, then electrically direct them to assemble themselves into circuits and antennas. Next, using different "toners," the nanobox will add a keypad, speaker, and microphone and finally build up a housing.

Don't expect such a gadget until around 2020. The first experiments to download nanoscale computer circuits won't happen much before 2005. A decade after the nanofab systems could be "writing matter," initially producing nanochips.

Concrete progress toward that goal came in July from the branch of nanotech called molecular electronics. A team from the University of California at Los Angeles and Hewlett-Packard Laboratories unveiled a new logic gate made by molecular self-assembly. Next, the team will shrink the technology on chips, aiming to produce chips "in the region of 100 nanometers on a side," says H. J. Kuekes, a researcher at HP Labs. "VLSI makes chipmaking so expensive now," he adds, "is the extreme mechanical precision required. But with chemistry, we can turn chips like Kodak does film—in long rolls, you'll just cut out little squares."

Such notions have grabbed Washington's attention. Seven months ago, the Defense Advanced Research Projects Agency launched the Molecular Electronics Program. And progress seems eager to spend a lot more on nanotech research. One plan would double the current budget of \$232 million over the next three years. The White House may also, because it has already tagged nanotechnology as one of 11 critical research areas.

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COMDIAL
The Rising Star

bogen's crew, unveiled in mid-August, is a design for a minuscule robot to help assemble nanofabrication systems. Currently, it measures almost five millimeters along one side, or one-sixth of an inch. But suppose such robots were to use nanofab techniques to produce progressively smaller versions of themselves. Eventually, they might end up smaller than specks of dust.

Robots that tiny could fulfill K. Eric Drexler's vision of nanobots capable of manipulating individual atoms. In his trailblazing 1986 book, *Engines of Creation*, the founder

of the Foresight Institute in Palo Alto, Calif., painted a riveting picture of nanotech's potential. Drexler essentially launched the nanotech era and inspired such fancies as armies of invisible nanobots roaming carpets and shelves, dismantling dust into atoms that get reconstituted as napkins, soap, or anything else—including nanocomputers.

Building computers atom by atom remains a distant dream, though, and Ellenbogen wants quick results. "So I'm betting on molecular electronics for the near term," he says. That looks like a good nanogamble. ■

5

The clocks ahead will have our own face

T I M E

by DIANE BR

**UNROOTED LIVING IS
SPAWNING THE TIMELESS
SCHEDULE—WITH
RESTAURANTS
SIMULTANEOUSLY
SERVING BREAKFAST
CEREAL AND MARTINIS
BECAUSE PEOPLE'S
STOMACHS ARE RUNNING
ON DIFFERENT INTERNAL
CLOCKS**

Time was, people rose with the sun. And they set with it, too. Nobody cared if it was sunny somewhere else. Voices didn't carry across the planet. Time was local: time to milk the cows, time to rest in the corn, time to sit and rest. World time zones were ordained in 1884 but didn't catch on until right before World War I. Fifty years ago, few even imagined night skiing.



Increasingly, though, the andante beat of time was juked and jazzed. The reliable rhythms of day and seasons will yield to Constant Now.

The changes have already begun. Commerce and communications never cease. On cable-TV news shows, things happen at "half past the hour." You don't ask which hour, because local time is no longer the meaningful marker. Great events unfold in the electronic ether.

In the U.S., fewer than one-third of Americans have a workweek of standard 9-to-5 days, and that share is shrinking, according to the U.S. Census Bureau. Women and minorities are the most likely to work late shifts or irregular hours—as cashiers, clerks, or order takers. White-collar workers are doing more work at

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 **HEWLETT
PACKARD**
Expanding Possibilities

home, inviting the urgency of the business world into what was once a refuge. Wall Street, for instance, is becoming a red-eye profession as round-the-clock markets make "closing prices" an obsolete concept. Unrooted living is spawning the timeless schedule—with restaurants simultaneously serving breakfast cereal and martinis because different people's stomachs are running on different internal clocks.

The question is, how will all this timeshifting affect people's lives in the next 100 years? The Internet never sleeps, but people do. They must. By loosening the constraint of time, are we liberating ourselves—or submitting to a kind of 21st century enslavement? As science fiction writer Bruce Sterling points out, "3 a.m. is still the midnight of the human soul. And there are metabolic problems like seasonal affective disorder if you never see daylight."

On the good side, allowing people to live by their own clocks is profoundly democratic. The Ritz-Carlton Hotel in Kuala Lumpur, Malaysia, doesn't even trouble its corporate guests to acknowledge local time. A "one-night stay" consists of any 24-hour span of the guest's choice. The program has already been extended to other properties in Asia, where flights often come and go at odd hours.

Quite a convenience. Yet, the death of shared daily routines will shake society to its core. A Los Angeles resident who routinely gets up in the middle of the night to telephone Tel Aviv is living in L.A. in body only. If your neighbors are on different clocks from yours, then who will be

“
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affective
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never see
daylight
”

BRUCE STERLING,
 science fiction writer

part of your community? Perhaps the people on your E-mail list. Perhaps no one.

To see where this is headed, take the trends that killed Sunday store-closings—demand for convenience, odd work hours—and move them into warp speed. Almost every service, from lawyers to marriage counselors to golf pros, will operate 24 hours or risk death. Work will start at 4 a.m. or 4 p.m., depending on your preference. What will matter is what's delivered, not when it's done. Units of time will become fungible, like dollar bills: each moment fully interchangeable with each other moment.

Timelessness can become a kind of tyranny. Remember when the image of a portable computer at the beach signaled freedom? Now, it's a sign that the office never goes away. People bring their cell phones into concert halls and churches because, to them, rudeness is a lesser sin than missing an important call.

The problem comes down to movement vs. meaning. Longer trading hours, for instance, will mean more trades—but not necessarily better trades. James C. Ackerman, president of online brokerage Sloan Securities Corp., complains that 24-hour trading "won't give anybody time to sit and breathe and think." Instant access to information at all hours of the day could fill elevators and waiting rooms with "newszak" that numbs the brain. Increased efficiency is supposed to mean doing more things in the same time, not the same thing in less time. "Humans have

not evolved to move at supersonic speeds," says Howard Rheingold, a West Coast commentator on technology.

A reaction is already building. Stewart Brand, environmental pundit and author of the *Whole Earth Catalog*, is leading a project to create a giant clock that will run with winding for 10,000 years, ticking once a year. He hopes "The Clock of the Long Now," as he calls it, will remind people of the planet's continuity and their responsibility for it. In Silicon Valley, birthplace of hyperspeed "Internet time," executives such as Amazon.com's Jeffrey P. Bezos and Netscape Communications Corp. founder Marc Andreessen have taken to bragging about how much sleep they get. For them, the ultimate status symbol is the power to live by nature's clock rather than the Net's.

There is no going back to the agrarian past, of course. But some people will learn to dip in and out of the 24-hour flow, living by routines that suit them rather than chasing after a sun that never sets. Elizabeth DeMotte is one. As a Singapore-based employee of America's Ritz-Carlton Co., DeMotte says she gets her work done in "a very natural and flow" over any 24-hour period. "I think a contemporary global executive who tries to conform to traditional ideas of workdays and time is not only ineffective, but burning the candle at both ends," she says. Interesting—it was the candle, illuminating the night, that started us down this road.

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6

Religion will endure, affirming our vulnerability

RELIGION

by KAREN PENN

Why are we here? What does it all mean? Human beings will always ask the big questions. And religion will provide the context. Neither economic efficiency nor scientific rationalism has diluted the overwhelming force of religious beliefs, rituals, and myths. These have bound people together for centuries and inspired humans to great creative endeavor, as well as horrific destruction and mass murder.

Today, faith in its manifold guises is both tonic and counterweight to the rush of progress. It fills a void that material comfort cannot. It affirms humans' powerlessness, even as scientific knowledge arms us to

do more and more. Religion transcends the ebb and flow of human progress and events, absorbing knowledge the modern age brings and shrugging off its secularism.

In the U.S., 9 in 10 people claim to engage regularly in prayer, and 3 in 4 say they do so on a daily basis. The Religious Movements Homepage maintained by sociologist Jeffrey K. Hadden at the University of Virginia lists nearly 200 religions and cults, many of which are fast gaining adherents both in the U.S. and overseas. Through much of the world, old, time-honored religions and their fundamentalist offshoots do not seem to wane.

In the early 21st century, the pull of religion will intensify. And science and religion may find some common ground. Scientists have always sought answers about the mysteries of life. But increasingly, the narrow-bore scientific disciplines of the late 20th century will give way to interdisciplinary approaches asking the larger, overarching questions about complex patterns of life on earth. Physicists will continue to seek a unified theory that makes sense of the particles and forces that define our existence. Astronomers will search the farthest reaches of the heavens to fine-tune a cosmology that is fundamentally unfathomable. Even if they answer questions such as when or what, they can never answer why. Artificial-intelligence experts will imbue the humanoids they build with human values, emotions, and even self-awareness, ushering in what inventor Raymond Kurzweil calls the age of "spiritual machines."

Many branches of religion, meanwhile, will accept more of science's findings about the origin and nature of life. Theologians will welcome scientists' insights into religion's physical manifestations—the correlation between brainwave patterns and meditative states, faith, prayer, and healing. But they will not cede the role that religion plays in providing solace, in mediating ethical disputes, or in celebrating moments when a relationship to the unknowable fills worshippers with humility. No amount of scientific knowledge or material well-being can satisfy the soul's yearnings. And for that reason, in the 21st century nothing will easily attenuate the tidal pull that religion holds for most humans. ■

**SCIENCE AND
RELIGION WILL FIND
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SPIRITUAL ECSTASY,
PRAYER,
AND HEALING**



7

The mind is immortal

HUMANITY

by OTIS PO

**SOON, TECHNOLOGY
MAY HAVE THE POWER TO
TRACK EVERY WAKING
MOMENT OF YOUR
LIFE—AND PRESERVE
IT IN A FORM THAT
WILL ALLOW YOUR
GREAT-GREAT-GREAT
GRANDCHILDREN TO QUIZ
A VIRTUAL YOU**

So you'd like to live forever? By the year 2050, you might actually get your wish—providing you are willing to evacuate your biological body and take up residence in silicon circuits. But long before then, perhaps as early as 2005, less radical measures will begin offering a semblance of immortality.

Researchers are confident that technology will soon be able to track every waking moment of your life. Whatever you see and hear, plus what you say and write, can be recorded, analyzed and automatically indexed, and added to your personal chronicles. By the 2030s, it may be possible to capture your nervous system's electrical activity, which would also preserve your thoughts and emotions. Researchers at the BT Laboratories of British Telecommunications PLC have dubbed this concept the Soul Catcher.

In a preview of what the near term holds, Carnegie Mellon University two years ago unveiled a system called Synthetic Interviews, with Albert Einstein as its first subject. To

learn about the theory of relativity or a physicist's private life, you engage in what most seems to be a live videoconference with an ersatz Einstein. The system quickly poses each question and selects the best-match response from a bank of 500 video recordings. It's easy to forget what's going on underneath—speech recognition to digitize words, natural-language processing to understand the question, and a rating scheme similar to that used by Lycos Inc. to rank results of Web searches.

The hardware for early versions of virtual immortality exists now. You could document your daily life using tiny video cameras bedded in eyeglass frames. They could be linked to IBM's latest hard disk—it's the size of a quarter and could be housed in a pillbox. It stores 300 megabytes of data, enough to hold 30 days of your life. But by 2025, says David A. Thompson, a fellow at IBM's Almaden Research Center, a full year should easily fit on such Lilliputian disks.

MAINFRAMED MEMORIES. Software, though, is another matter. Techniques for analyzing and indexing streams of images are primitive. If your personal history of 20 years were like one gigantic videocassette tape, searching for a specific incident could take hours. So several laboratories are working on ways to catalog video content automatically. IBM Almaden's CueVideo team, led by Dragutin Petkovic, head of visual media management, is using artificial intelligence tools to sift video recordings for important scene shifts. The resulting index is an interactive storyboard with key frames from your life.

Eventually, these efforts will coalesce into "organized, online archives of everything that happens," predicts D. Raj Reddy, a professor of computer science at CMU. The



Einstein's brain? Not exactly, but software allows Carnegie Mellon University professor Raj Reddy to "converse" with a simulated version of the great scientist

Q

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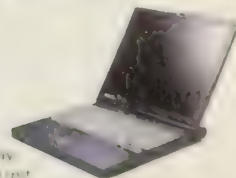


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all kinds of fanciful possibilities will become practical. For instance, someone can talk to "you" from the distant future via the Web. In 2099, your great-great-great grandchildren will be able to quiz a reconstituted you about what it was like to work with computers so big and clunky they had to be held on your lap. And what "you" reply won't be restricted to canned statements, as with Synthetic Interviews. Smart mind-mime software will extrapolate from the hard data to infer how the real you would have responded.

The same online infrastructure will transform the earth into a huge Starship Enterprise with virtual teleportation at your beck and call. But instead of "Beam me up, Scotty," Reddy predicts, "you'll say, 'Beam me there,'" and bam! you—or at least a holographic image of you—will be at a meeting of the elders of a New Guinea tribe. The network would provide instantaneous translation so you can understand the local lingo.

Far-fetched? "We have the technology to do most of this now," says Reddy. The real obstacle, he says, is lack of bandwidth.

There's also the issue of capital: These systems will be expensive at first. But the money will come quickly once the bandwidth is available. Competition will see to that. When engineering teams can collaborate through so-called telepresence, managers can call instant meetings in virtual reality, and everyone in the organization has infallible memories and shared access to the group's knowledge, "you've got a huge competitive advantage,"

says Reddy. Internet time will be poky in comparison. "Today's yearlong project will get done in a month, maybe a week," he predicts. So the companies that get there first "will clean everyone else's plates."

SMALL WONDERS. This will pave the way for BT Labs' Soul Catcher. It would use a portable supercomputer, perhaps in a wristwatch, with wireless links to microprocessors in your scalp and in the nerves that carry five sensory signals. So wearing a video camera would no longer be required.

At first, the Soul Catcher's companion system—the Soul Emancipator?—might have trouble replicating you in complete detail. Even in 2030, we may still be struggling to understand the brain's internal workings. Reading your thoughts and interpreting your emotions might not be possible. But your signals could be conserved for the day when they can be transferred to silicon circuitry to rejuvenate minds as immortal entities. Researchers can only wonder what it will be like to wake up one day and find yourself alive inside a machine.

For people who chose not to inhabit such virtual immortality could still ease the burden of futility that now haunts many people. Individuals would know their lives would not be forgotten, but would be preserved as a part in a multimedia quilt that keeps a permanent record of the human race. And future generations would have a much fuller understanding of the past. History would no longer be dominated by just the rich and powerful, the Hollywood icons, and a few elite thinkers.

8

What if the forests were silent?

ENVIRONMENT

by John Carey

Dawn breaks on a tropical forest. Conservationists have protected the trees from the bite of the chain saw, and under the dense canopy, all seems primordial and pristine. But something is missing. Dawn normally brings a symphony of sound. But here there is only silence. No raucous cries of monkeys. No trilling avian melodies. No rustling in the underbrush. The animals are largely gone.

By 2020, this silent dawn could be occurring almost anywhere in the world. Indeed, such "empty" forests already have begun to appear, in countries from Laos to Zaire. The cause is simple: Humans are killing the animals. Whether by snare or spear, trap or gun, people are taking a staggering toll on anything that can be eaten or sold for food ▶

CONSERVATIONISTS BELIEVED THEY HAD SUCCEEDED IN SAFEGUARDING THE FORESTS. BUT ALTHOUGH TREES AND LAND HAVE BEEN SECURED, THE ANIMALS ARE DISAPPEARING. MORE THAN A QUARTER OF ALL EXTINCTIONS, WHERE BLAME CAN BE ATTRIBUTED, HAVE BEEN CAUSED BY HUMAN HUNTERS

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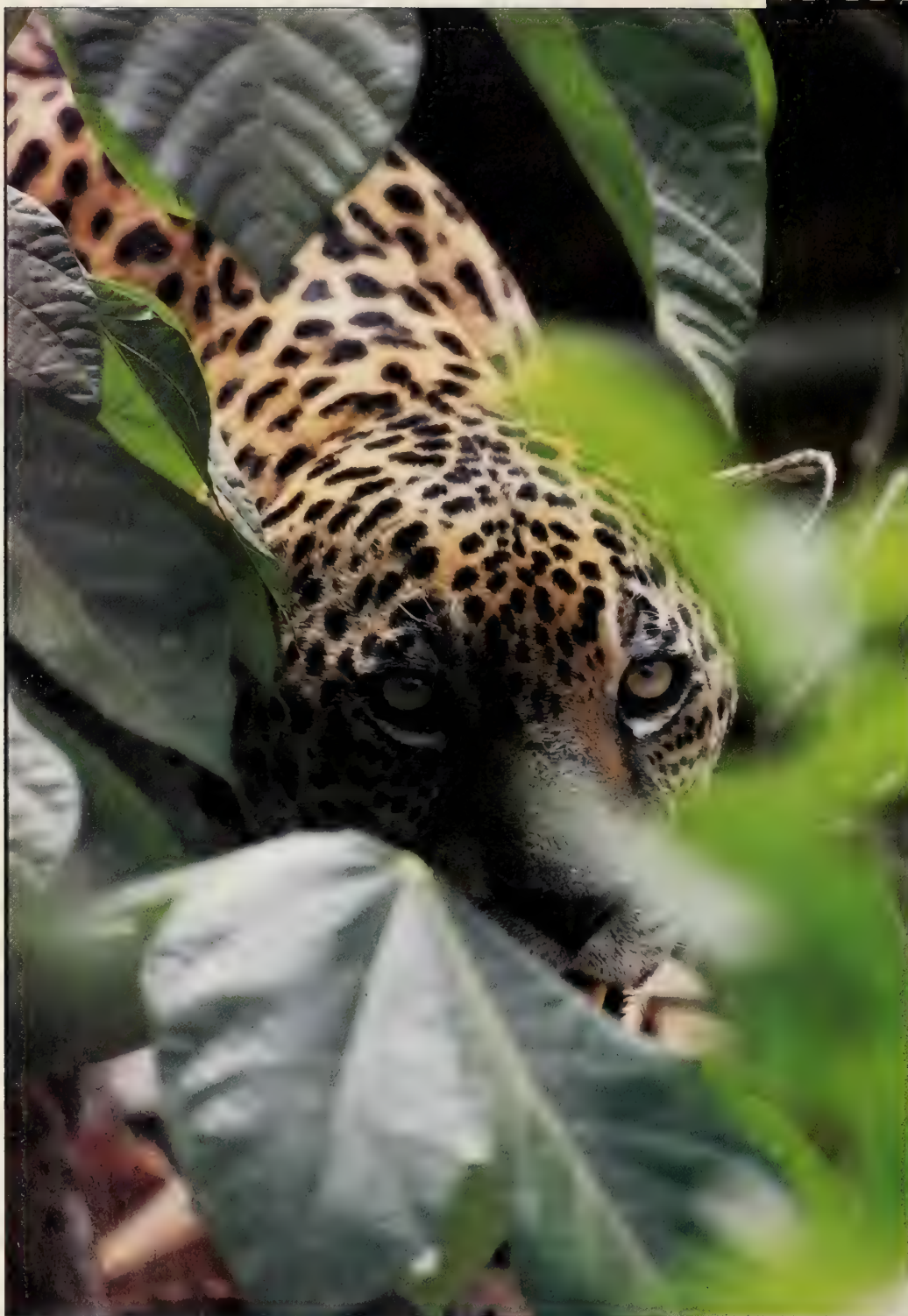
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As their prey is killed by human hunters, large animals in some countries are suffering. A few governments, meanwhile, have taken steps like banning the commercial trade in wildlife

or medicine. Wildlife biologists are only starting to tally the cost, but estimates range from up to 24 million animals killed each year in the Brazilian Amazon to 600,000 pounds of wild meat taken annually from Korup National Park in West Africa alone. Hunting

is thought to be responsible for more than one-quarter of all known extinctions where a cause can be attributed. "We've done a lot in stopping the loss of habitat. And we thought years ago that would end the battle," says field biologist Alan Rabinowitz of the Wildlife

Conservation Society (w). "But it didn't. We didn't foresee this relentless exploitation."

To conservationists struggling to protect a natural world already reeling from such threats as population growth, deforestation, and pollution, the rising slaughter adds a formidable challenge for the next century. The underlying causes include the growing numbers and Westernization of forest-dwelling tribes that add three other factors: the influx of ranchers and settlers, the building of logging roads that make remote areas accessible, and the enormous value of the natural-medicine trade, where a bagged rhino can bring in more money than locals could otherwise earn in a lifetime. "You are not going to repopulate forests with wildlife unless you remove the people," says John W. Terborgh, a Duke University biologist.

SEED SPREADERS. The effects of hunting go far beyond just the species being killed. Take the lemurs out of Madagascar, a recent study shows, and different trees in the forest could disappear because their seeds are no longer being spread. In parts of India, tigers are suffering from lack of prey, which is being killed by humans instead. "We may be holding on to the forest, but we're losing the animals that make the forest function," says WCS biologist John Robinson.

There is some hopeful news, however, as a few organizations and governments are taking action. Responding to research from the WCS's Elizabeth Bennett, for instance, the government of Sarawak, Malaysia's largest state, ended the commercial trade in wildlife, limited shotgun shell sales, and closed off logging roads when logging has been completed. "We have to be optimistic or we'd give up entirely," says Bennett.

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9

On the Net, music is the ultimate metaphor.

COMMUNICATIONS

by Steven V. Brull

Joshua McFadden, a computer and electronic-music major at Oberlin College in Ohio, doesn't need a contract from a big record label. With a PC, keyboard, and a fast Internet connection, the third-year student in a cramped dorm room sends his compositions around the world. "Commercially, I'm not even remotely successful," he says cheerfully. "But once I got a letter from a listener in South Africa."

Across campus, a college sophomore uses the Internet as a massive music library. "You can find anything," he says, reaching out over the campus network with his PC to download a track from a fellow student's computer. He adds the tune to the 800 tracks on his hard drive, including 111 Beatles songs, 25 Pink Floyd tracks, and an entire Lauryn Hill album—all plucked off the Net for free.

Prowling through the dorms is Steve Crandall, a 47-year-old research scientist at AT&T Labs in Florham Park, N.J. He and his colleagues are frequent visitors to Oberlin. And with good reason: These students meet, live, work, and play on a 100 megabit-per-second network—the kind of thing that will one day connect virtually all of AT&T's customers. Crandall studies how students locate the songs they like, when and where they listen, how they respond to levels of sound quality, and how they feel about copyrights and business. The kids are rewriting the rules of online distribution—not just for music but also for books and videos. And AT&T, as America's biggest cable and telephone company, believes it must establish intimate bonds with them. "We've



Musician and Oberlin College student Joshua McFadden has an enormous base of potential fans—anyone who can log on to the Internet. He already has listeners in South Africa

THE NET WILL GIVE
THE CHANCE TO DISPLAY
OUR INNER ARTIST
WITHOUT HAVING TO
WAIT FOR A RECORD
CONTRACT OR BIG
DEAL. VIDEOS, MUSIC
AND LITERATURE CAN
BE ONLINE AND
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learned things at Oberlin," says Crandall. "Anecdotal evidence suggests that music is replacing pornography as the high-bandwidth killer app."

In the 21st century, we'll all get a chance to be like Oberlin students. We'll tap into an Internet that's gushing with music, video, and books—and feed it with our own creations. Artistic expression will flower, and the boundaries between artists and consumers will blur. Indeed, the Net offers advanced technological societies a tantalizing pathway back to the pre-industrial democracy of art. Electronic instruments and cameras are getting smarter and cheaper. In time, software will allow amateurs to make studio-quality recordings and movies—on a modest budget—that will shock, delight, and comfort the audiences beyond their living room stages.

MATTER OF TIME. What's happening at Oberlin and hundreds of other colleges puts tastemakers at film studios, record companies, and publishers in a quandary. Near term, they face encroachment from the likes of Amazon.com Inc., which has already begun distributing music by unsigned bands. Further down the road, the Internet—or its successor—will give artists the means to promote themselves. Today, software companies with no earnings and few assets can execute multibillion-dollar public offerings. No artist has pole-vaulted to platinum on the Net, but it's just a matter of time.

No doubt the music of a thousand Oberlins will be crazily cacophonous. But don't worry: Human and

“

The Internet
lets you
distribute your
ideas without
having to
actually put
them onto
a tape, walk
them down the
street to your
friend's house
and say,
‘Can we please
listen to this?’
Anybody can
connect. I've
had everything
I've written
musically
online for the
past two years.

”

JOSHUA MCFADDEN,
student and musician,
Oberlin College

automated guides will help you find what you want, when you want it—even if you don't know exactly what it is. Longing for that Miles Davis track you heard on the radio last week? Hum a few bars. Software will analyze the melody, download it, and play it. Prefer something similar, but with more edge? Ask your music “bot,” a software agent whose sole purpose is to understand your taste. “The technology to do all this exists,” says Jack Lacy, a senior research scientist at AT&T Labs. “We just need to put the pieces together.”

The hard part will not be technological but social and legal. Intellectual-property rights for CDs, books, and movies are built on implicit assumptions of scarcity: Not everyone can have these goods, since production and distribution resources have been limited—until now. Today's assumptions will fade when access is ubiquitous, and perfect replicas can be made for free.

At Oberlin, for instance, most students say musicians and others should get paid for their work. But the lure of free access is overwhelming. The lines are long at the Seeley G. Mudd Center, where students are copying CDs for personal use. As for student composers, instead of charging for digital versions of their work, some students prefer to give their music away to spread their ideas. “I can always make my money by selling tickets to performances,” says Jim Altieri, a fourth-year double-degree student in composition and geology.

The record industry has no intention of fading out. And Hollywood—already

nervous about pirated videos distributed over the Net—would do well to study the record industry's machinations. To stave off irrelevance, music companies are moving to flexible pricing models. At E-music.com, you can purchase music by the track with record companies' blessings. Ultimately, anyone could sell music, says Atlantic Recording Corp. Co-Chairman Val Azzoli. “You read about a band at the magazine, push a button, and get a song for 50¢.” Or maybe you'll pay subscription fees to tap into a giant music collection stored on a computer server, paying the week or month. “The business model will change, and when it does, music will change,” Azzoli says.

Whatever new payment schemes emerge, Azzoli believes listeners will reward someone to discover and market talent. But is the intermediary the company with the best scouts, the best software, or the best brand name on the Net? Many think the most efficient predictor of what you will enjoy is a community of your peers. And the tools to spontaneously pool and share such communities are in hand. The primitive precursor is called “collaborative filtering,” a mechanism that lets Amazon.com recommend books based on buying patterns at its site. But the AT&T labs, researchers apply more sophisticated algorithms to analyze and rank artistic content posted on individual home pages. GeoCities, a large Net community recently absorbed by Yahoo! With these next-generation software tools, a surfer

ONE DAY WHILE FINDING ENERGY,
WE FOUND A WAY TO GET
WATER TO WATERMELONS.



HOW TEXACO TURNS WASTE WATER INTO IRRIGATION FOR THIRSTY CROPS.

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A WORLD OF ENERGY.

search of content could set the parameters a dozen different ways to discover how community members rate different types of music, movies, or art.

Such tools threaten any industry that seeks to be a purveyor of taste. It will be hard on record companies. But under at least one scenario, they won't have to worry so much about piracy. As the whole notion of "distributing" music gives way to "delivery on

demand," popular artists—or companies that represent them—may reap their commercial payoff by aggregating an audience, much as today's broadcast networks do. "NBC doesn't worry if you pirate Seinfeld, do they?" asks Jim Griffin, CEO of Cherry Lane Digital Inc., a technology consultancy in Los Angeles. Neither will the music industry, or whatever it evolves into. The problem of piracy becomes moot,

because advertising and marketing revenues increase as more people tune in.

These issues aren't the concerns of most Oberlin students. They've helped establish new modes of listening to music. And through music and technology, they've found a way to sustain the deep emotional thrills of youth long after graduation day. Wherever they end up physically, they can assemble in virtual rooms

and enjoy unlimited freedom to listen, see, and explore Music—and by extension, of art—is something to create, discover, and share. College students have pioneered these new modes armed with the best tools: the Internet, and blessed with the technical and artistic skills to make use of them. We should all be so lucky. And as complex network technology becomes simple, invisible, and ubiquitous, we will be.

10

New neighborhoods can combat urban sprawl

CITIES

by John Carr

AS THE NEW CENTURY APPROACHES, MANY AMERICANS ARE DISTURBED BY THE FRUITS OF THE RELENTLESS EXPANSION OF THE SUBURBAN FRONTIER. LAST NOVEMBER, VOTERS PASSED MORE THAN TWO-THIRDS OF 240 BALLOT INITIATIVES TO PRESERVE OPEN SPACE OR OTHERWISE RESHAPE DEVELOPMENT



Tract housing near Cincinnati: 1,000 to 3,000 acres of open land are developed each day in the U.S.

Kendall is a prime example of sprawl. What passes for the downtown of this south Florida suburb, a few miles southwest of Miami, is a hodgepodge of office buildings, a mall, parking lots, auto dealerships, and a dingy canal. But over the next 40 years, Miami-Dade County planners hope to pack Kendall with people, creating a European-flavored town center with romantic canal-side walkways, tree-lined boulevards, trolleys, colonnaded sidewalks, and stylish condominiums

Income from operations: +18%

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Our life sciences businesses are continuing to experience improved growth and profitability.

Rhodia's recovery, in accordance with previous forecasts, should facilitate its investment, market conditions permitting. The planned integration of Rhône-Poulenc and Hoechst is making excellent progress. Backed by the overwhelming support of shareholders, our joint teams are working with great energy to prepare for the launch of Aventis."

Jean-René Fourtou
Chairman & Chief Executive

Consolidated accounts 2nd quarter 1999

Net sales:	3.490 billion€	(+2.7%) ⁽¹⁾
Net income:	72 M€	
Excluding exceptional items:		
Income from operations ⁽²⁾ :	525 M€	(+18%)
Net income:	183 M€	(+0.1%)
Earnings per share:	0.49 €	(-1%)

Second quarter highlights:

continued strong improvement in earnings from the life sciences businesses (+15%)

clear improvement in Rhodia's earnings (+23.9%)

exceptional item of 156 M€ before tax, comprising, for the most part, charges linked to Aventis and a provision for litigation costs in the animal nutrition business. The comparison with the second quarter of last year is also impacted by a one-time gain of 436 M€, recorded in the second quarter 1998, following the listing of Rhodia.

Life Sciences

Consolidated net sales:	2.100 billion€	(+6.7%) ⁽¹⁾
Income from operations:	360 M€	(+15%) ⁽²⁾

Pharma

Rhône-Poulenc Rorer,

Pasteur Merieux Connaught, Centeon

Consolidated net sales:	1.426 billion€	(+9.9%) ⁽¹⁾
Income from operations:	243 M€	(+30.6%) ⁽²⁾

Rhône-Poulenc
is a leading
life sciences company
growing through
innovations
in human,
plant and animal
health



and through
its specialty
chemicals subsidiary,
Rhodia.

The improvement in net sales, particularly noticeable in the United States (+23%), resulted from increased sales of new products:

- Oncology: Taxotere® continued its strong sales growth (+40.9%⁽³⁾ to 106 M€). Campto® also saw excellent growth with sales of 21 M€ (+113.1%⁽³⁾).
- Thrombosis/Cardiology: sales of Clexane®/Lovenox® increased 41%⁽³⁾ to 178 M€.
- Central Nervous System: Rilutek® continued its strong sales growth, +30.6%⁽³⁾ to 16 M€.
- Respiratory/Allergy: Nasacort® and Nasacort AQ®, +183.4%⁽³⁾ to 56 M€; Azmacort® declined 31.9%⁽³⁾ to 33 M€ resulting from continuing destocking and continued pressure from competitors.
- Vaccines: strong sales were recorded in the USA with injectable polio vaccine Ipol®, +90%⁽³⁾ to 31 M€, and flu vaccines, +100%⁽³⁾ to 10 M€.

Plant and Animal Health

Rhône-Poulenc Agro,
Rhône-Poulenc Animal Nutrition, Merial

Consolidated net sales:	684 M€	(-0.1%) ⁽¹⁾
Income from operations:	143 M€	(-6.9%) ⁽²⁾

In the face of difficult market conditions, the crop protection business benefited from the development of new products: the insecticide Regent®, +54%⁽³⁾ to 38 M€ and the herbicide Balance®, +14%⁽³⁾ to 7 M€ continued to experience strong sales.

In animal nutrition, despite a good increase in volume, sales continued to be impacted by the strong pressure on prices.

Rhodia

Consolidated net sales:	1.414 billion€	(-6.7%) ⁽¹⁾
Income from operations:	166 M€	(+23.9%) ⁽²⁾

The second quarter was marked by a significant recovery in all of Rhodia's divisions. Income from operations saw significant growth due to the positive impact of profitability improvement measures.

www.rhone-poulenc.com

Investor relations :
+33-1 47 68 07 05

(1) On a comparable basis.

(2) Operating income after financial income and expenses.

(3) Excluding the impact of exceptional items.

and apartment houses. The theory is that the best way to keep people from spreading out all over the landscape is to give them a good reason for working, playing, shopping, and living close together.

A dream? Maybe. But as the new century approaches, many Americans are disturbed by the relentless expansion of the suburban frontier. Right now, 1,000 to 3,000 acres of farmland, forest, and other unbuilt-upon land are developed every day. In once-bucolic Loudoun County, Va., outside Washington, "all of a sudden, people are sitting in traffic jams, with crowded schools and higher taxes—and wondering how the hell development is good for them," says Scott K. York, chairman of the county's Board of Supervisors. Says Carol M. Browner, administrator of the U.S. Environmental Protection Agency: "People want a different kind of future."

Glimpses of such a future exist. Stockholm, Sweden, a city of islands and winding streets, is one of many in Europe that are meccas for walkers and paragons of mass transit. Stockholm is surrounded by compact satellite communities connected by trains. More than half of the residents of the suburban town of Vällingby commute by mass transit. The area's beauty proves that clusters of development around rail lines don't have to be ugly.

SCHMOOZING ON PORCHES. In the 1970s, metropolitan Portland, Ore., drew a line around its core, severely limiting development outside of a 230,000-acre area. That, coupled with an expanded rail and bus system, has enabled the metro area to accommodate a 50% increase in population since the 1970s with only a 2% increase in developed land area and only a moderate rise in the number of trips by car. Communities built by anti-sprawl planners, such as Seaside, Fla., and Kentlands, Md., make it easy for people to schmooze on front porches and walk to stores. Seaside is so popular that one-bedroom cottages can go for more than \$500,000.

Far bolder plans are on the drawing boards. The five counties in South Florida, already home to 5.5 million people, are expected to swell to 7.5 million by 2020. Three-fourths of the growth is taking place west of the I-95 corridor, where there's more open land. That's costing the state billions for new roads, while threatening the Everglades just to the west. So the region has launched an Eastward Ho! initiative to funnel growth into the eastern section. A key part is attracting people back to places such as Kendall. "People are realizing it's dumb to throw away parts of our communities," says Isabel Cosio

“With the retirement of baby boomers, we will see a demand for central places, the likes of which we have never seen before... We are going to get rid of our suburban house and move into a village or urban-like setting.”

ROBERT W. BURCHELL,
Center for Urban
Policy Research,
Rutgers University

Carballo, Eastward Ho! coordinator at South Florida Regional Planning Council.

Atlanta, so choked with traffic that companies are deciding to leave or not rethere, has also decided to make changes. Metro Atlanta Chamber of Commerce recommended creating a regional superarter to build new transit lines and redirect development. BellSouth plans to move 13,000 employees from the suburbs to offices in city near transit stops. Employees who on the train ride home will be able to do faxes and E-mails from facilities at the station before hopping in their cars.

Trying to create neighborhoods and downtowns where residents can walk to shops or catch a streetcar to work is an echo of America's own past. In Silicon Valley, tech CEOs see transportation bottlenecks and housing costs as barriers to economic growth, so they're pushing clustered development and transit. "It is a return to the communities that we had in America in the 19th century," says Carl Guardino, president of the Santa Clara Valley Manufacturing Group, an industry-backed organization.

Making a real dent in urban sprawl is an enormous challenge. "Americans are addicted to cheap gas, weak land-use controls, and subsidies for roads," says Columbia University historian Kenneth T. Jackson, author of *Crabgrass Frontier*. And people don't like the idea of cramming more homes and apartments into high-density pockets for the sake of controlling sprawl elsewhere. It's a dilemma Ohio developer Charles J. Ruma: "Americans hate two things: sprawl and high density."

Local ordinances often help cause sprawl by mandating big lots and too-wide roads. "We worked with a township that had an ordinance requiring that roads on the interior of a subdivision be at least 34 feet wide. That's enough room for three semis to have a lane change," says Keith Charters of the Traverse Area Chamber of Commerce. He estimates an 18-foot road is plenty wide enough.

But attitudes are changing. Vice-President Al Gore has made sprawl a bogeyman in his Presidential campaign. Last November, he passed more than two-thirds of 240 legislative initiatives, authorizing \$7.5 billion in spending, to preserve open space or otherwise tackle sprawl. "We can redirect development patterns anywhere we want," says Robert W. Burchell, professor of urban planning at Rutgers University in New Brunswick, N.J. As traffic jams worsen and farmland disappears around our cities, we may be about to begin a profound reshaping of the American landscape.

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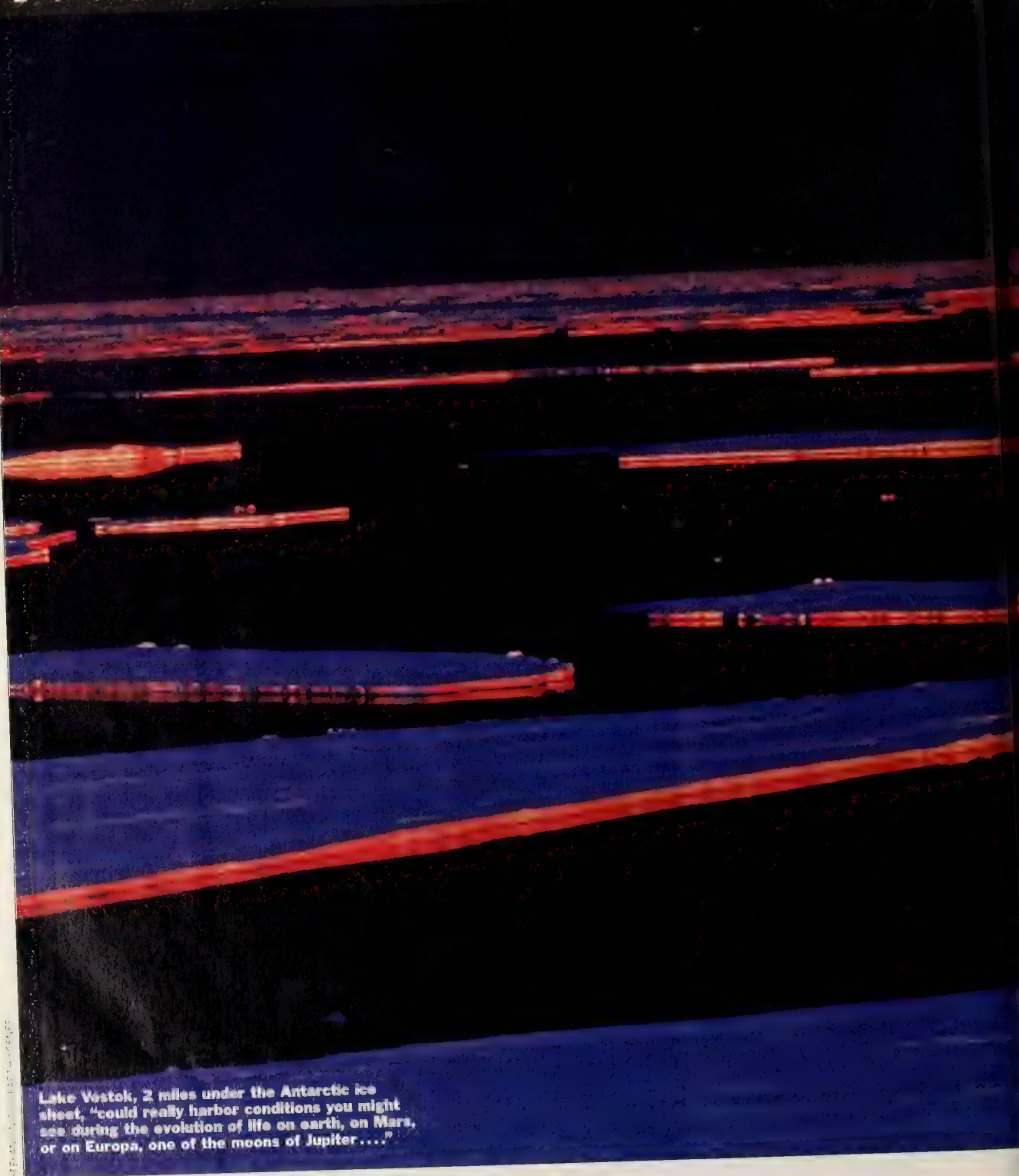
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11

Creatures on the fringe hold secrets of life

B I O L O G Y

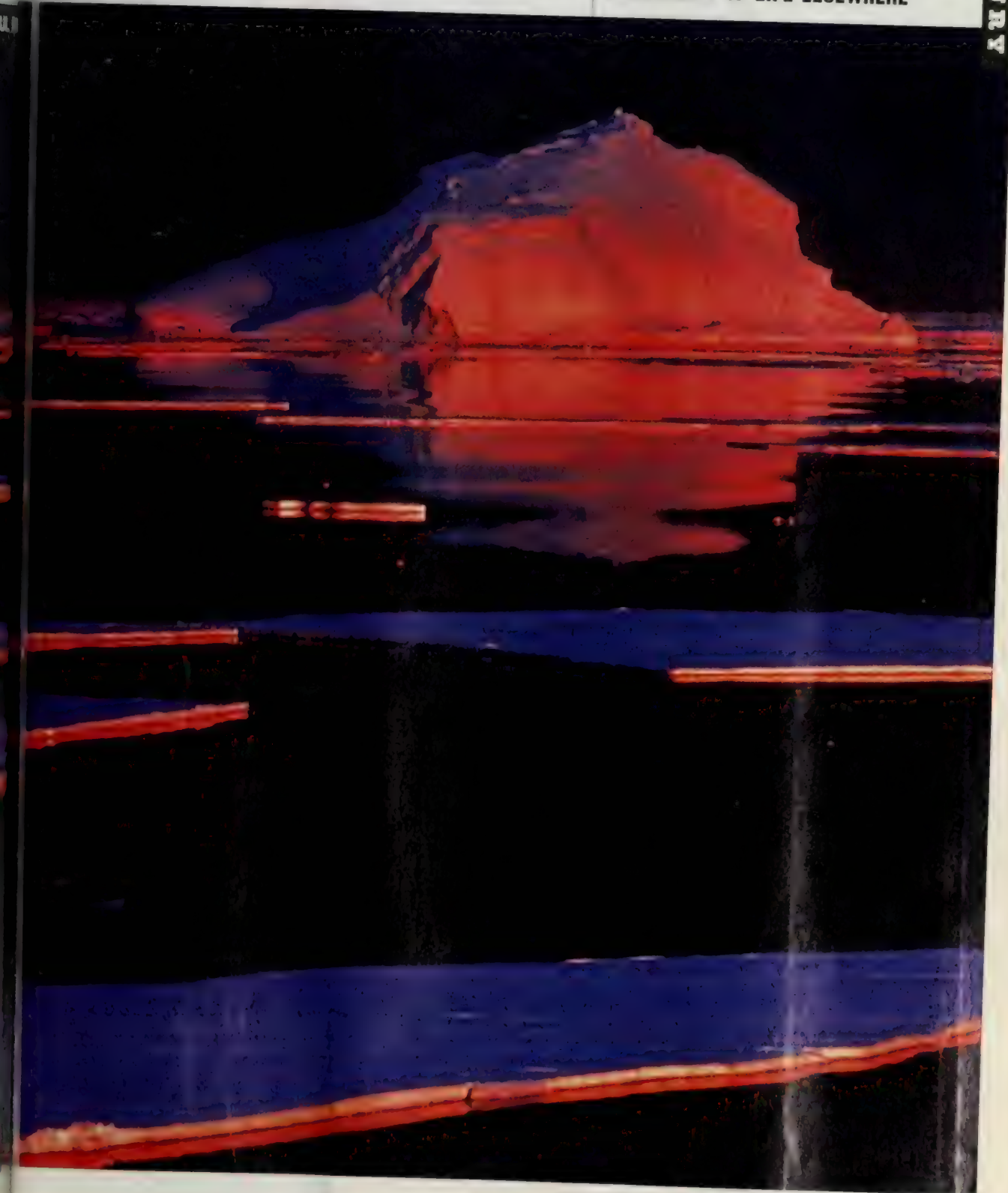
by PAUL RABINOW



Lake Vostok, 2 miles under the Antarctic ice sheet, "could really harbor conditions you might see during the evolution of life on earth, on Mars, or on Europa, one of the moons of Jupiter...."

In 1966, Russian and British scientists made a most improbable discovery: They found a huge fresh-water lake entombed under the two-mile-thick east Antarctic ice sheet. It was the size of Lake Ontario but deeper, reaching depths of 1,650 feet. Pressure from the weight of the ice sheet above it kept it

**DURING THE NEXT 10 YEARS,
SCIENTISTS MAY DISCOVER STARTLING
INFORMATION ABOUT THE ORIGIN OF
LIFE ON OUR PLANET AND THE
POSSIBILITY OF LIFE ELSEWHERE**

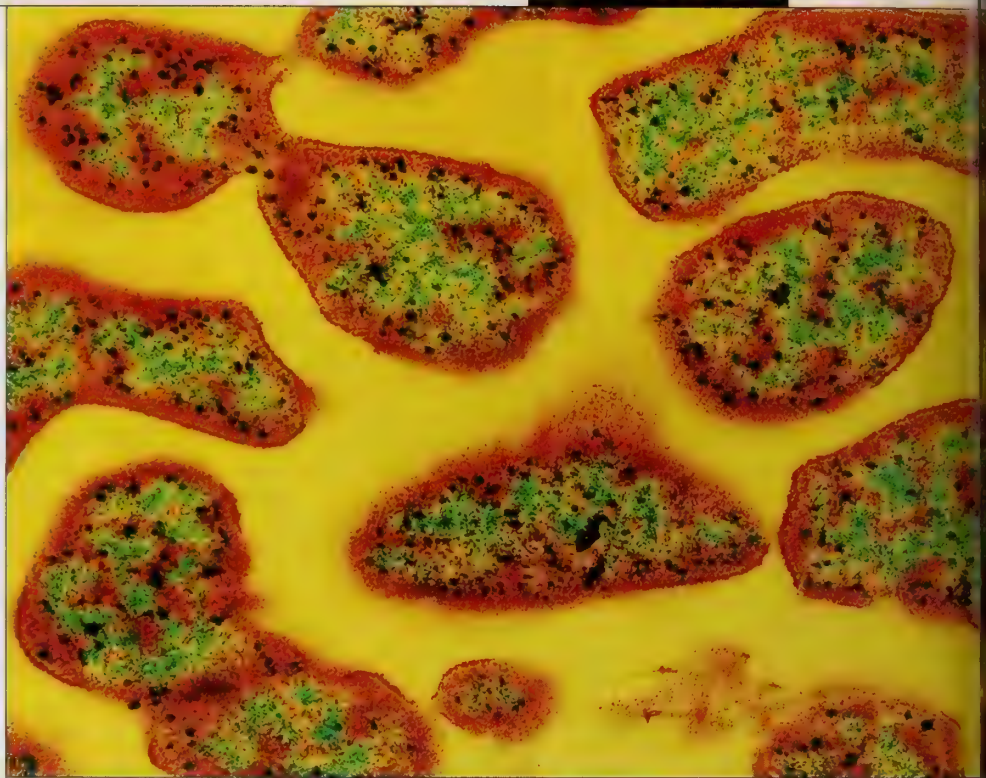


liquid even though its temperature was a few degrees below freezing. Geologists and seismologists delighted in the discovery, but it was biologists who saw the unique opportunity the lake presented. Lake Vostok, as it was named, has been isolated from the earth's surface for eons. The water in it is probably a million years old. Biologists quickly recognized that the lake could harbor creatures unknown anywhere else on earth. No sunlight reaches the lake, but microbes can live independently of the sun. And if the lake sits on a volcanic rift, the energy from underground heat vents could give rise to a thriving community.

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Lake Vostok provides a unique opportunity to study life in extreme environments. Only a decade or two ago, many biologists would have guessed that life could not exist in the coal-black currents of a sub-freezing underground pool like Vostok. But recent discoveries of life in boiling geothermal cauldrons, natural sulfuric acid pools, and other extreme environments have changed expectations dramatically.

"I've done a 180," says Prisco. "I was a skeptic all the way." That changed when Prisco went to Antarctica and found ancient microbes living in



Microbes have been found in an Antarctic valley that is just a little warmer than the surface of Mars.

ice layers in the McMurdo dry valleys, a region only a little warmer than the surface of Mars. "In the next 10 years, we're going to see more information turning up about extraterrestrial life, and about the origins of life on our planet," he says. Many of the microbes found contain exotic enzymes of great practical value in, say, high-temperature industrial processes.

Studies of these life forms are also changing scientists' conception of life. The eruption of life on earth was once thought to be a wondrous consequence of earth's unique position in the solar system—close enough to the sun to draw warmth and energy, without becoming a crisp briquette like Mercury or a boiling Venusian hothouse.

Now, it seems, living organisms do not require such singular circumstances. Many biologists now think it likely that some sort of life—most likely, microbes—will be found on other planets, and even on moons and asteroids.

Thomas Gold of Cornell University, for example, has put forth the controversial notion that rock strata deep underground, at high temperatures and pressures, are teeming with microbial life. "The total amount of the microbiology at that depth may well be more, in volume, than the total amount we have on the surface," Gold says. Underground life might be common throughout the solar system—it is humans, scraping out a living on the cool, desiccating surface, who are living in extreme conditions, he says.

Many biologists dispute Gold's arguments. They say microbes cannot survive at excessively high temperatures and pressures. Gold says he has found microbes at extreme depths, but critics say the deep-earth samples could have been contaminated with organisms from the surface or shallower depths. There is no question, however, that the discovery of life on the fringe, in various extreme environments, is transforming biology, and

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Many of these organisms are part of a newly discovered branch on the tree of life. Called archaea, they share properties of bacteria and higher organisms—and they have some characteristics all their own. Studies of some of these organisms have revealed an unexpected source for certain cellular proteins that are also present in human beings, says Jonathan Trent, a biologist at NASA's Ames Research Center in Mountain View, Calif. "It's a source of inspiration, of reveries about what life is capable of," Trent says.

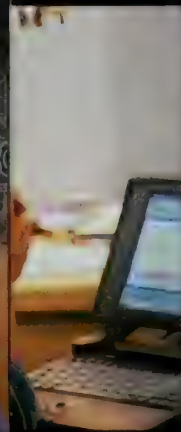
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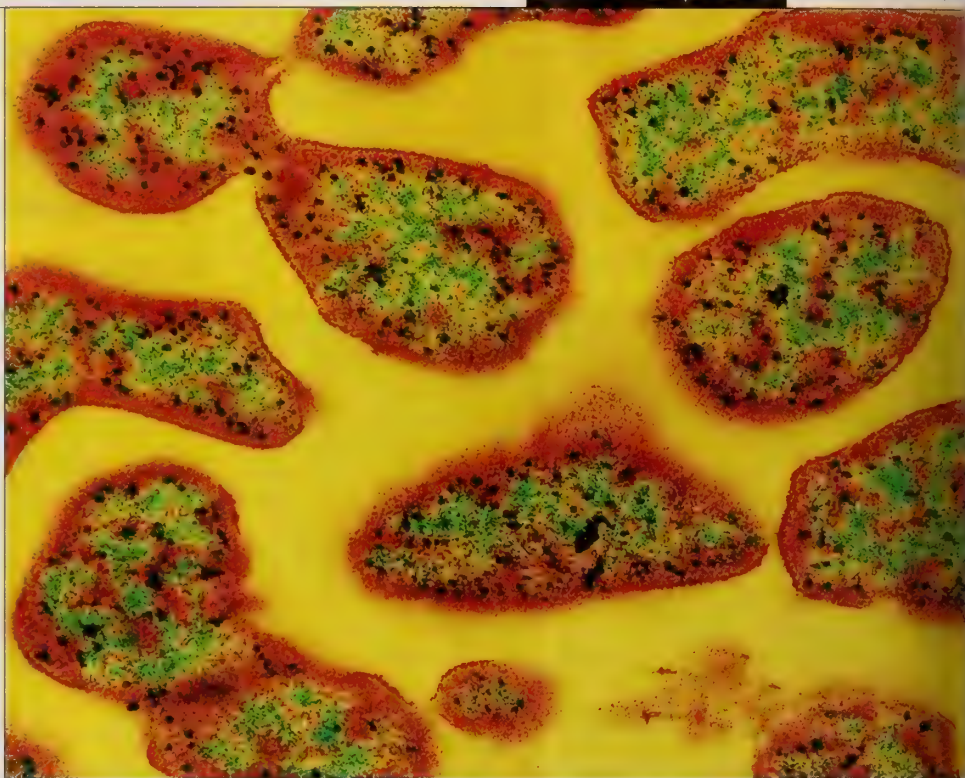
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PRESENTS A GUIDE TO THE 21ST CENTURY

ASOUNDING TALES

WHAT MIGHT COME TRUE!

Watch out! Science is a low science fiction! As it is getting harder to apart. Just look around: dispatch software robots to find the Net, tune satellite signals excursions on electronic maps, and our unborn children for genetic disease.

That's just the beginning. In a few decades, we'll cloak Planet Earth in a seamless wireless network, jack our brains directly into the Net, assemble new materials atom by atom, perhaps begin to

climate on Mars to establish colonies, and possibly launch probes to explore distant worlds.

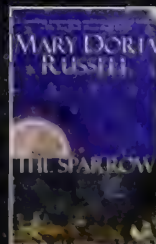
Who says? Well, it might be many things, but it also predicts the future.

see around us today. Hugo Gernsback conceived what we now call science fiction in a 1911 novel called *Ralph 124 C41+*. Arthur C. Clarke envisioned geostationary communications satellites. And in a 1984 novel

called *Neuromancer*, William Gibson fleshed out a vision of a global digital information matrix, which he named "cyberspace."

For a glimpse of what lies ahead, University of Michigan literature professor and sci-fi expert Eric Rabkin teamed up with

BUSINESS WEEK Senior Writer Neil Gross to survey this vast body of fiction and pluck out the predictions that seem the most plausible, most promising, most frightening, or simply the most fun. Here is BUSINESS WEEK's sci-fi guide to the 21st century.



AND TREMEY & JOE CALVILLER

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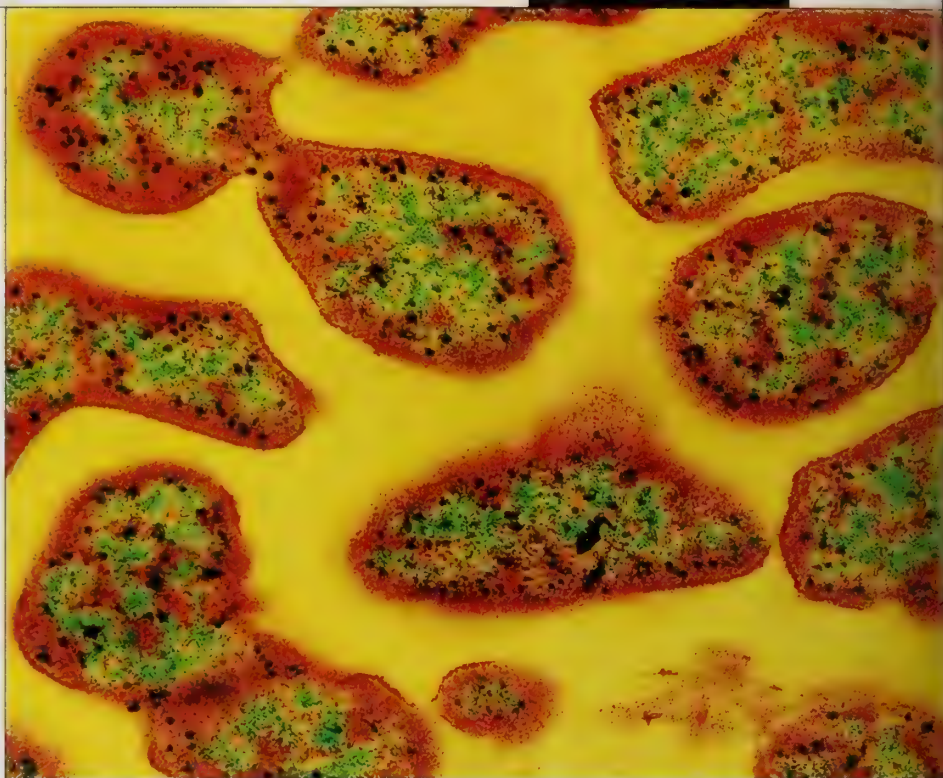
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A SCI-FI GUIDE TO THE

fiction is a wellspring of ideas for the next century. Many of the advances will be possible: "nanomachines" a few atoms wide, a dense network around the body for gene therapies that will slow aging. Other developments will be too huge to grasp in a glance—an elevator rising from the equator to a permanent space station, cities beneath the sea, asteroids serving as starships, colonies on Mars. From the elements of irreconcilable

scale, we stitched this tapestry of the 21st century, drawing on predictions in the following 30 astounding tales:

HUMAN

Why settle for inferior human hearing and vision when we could hear like dogs and see like eagles? Sci-fi writers explore all avenues of enhancement: ***The Unsleeping Eye***, D.G. Compton (1974): The hero has an artificial eye that lets his handlers see the woman they have him stalk. **1**

The Futurological Congress, Stanislaw Lem (1971): Characters pop pills to improve math and music skills.

Limbo, Bernard Wolfe (1952): Advanced prosthetic limbs powered by tiny nuclear motors bestow superhuman prowess on amputees. Multiple amputation becomes a status symbol.

Inter Ice Age 4, Kobo Abe (1959): Artificial gills let humans live in cities under the sea. **2**

Woman on the Edge of Time, Marge Piercy (1976): Children are gestated in artificial wombs. **3**

INHUMAN

Robots, androids, artificial intelligences and other sentient nonhumans inspire writers because they are simultaneously more and less than human:

War with the Newts, Karel Capek (1936): By tampering with the environment, businessmen unleash intelligence in another species. The creatures were newts, not robots. But author Capek also coined the word "robot" in *R.U.R.*, a 1920 play. **4**
I, Robot, Isaac Asimov (1950): Compiled from short stories

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Machines will be smarter than we are.

ARTIFICIAL INTELLIGENCE

by OTIS PORT

NERBAINS BORN OF SILICON WILL
CHANGE EVERYTHING. PREVIOUSLY
TRACTABLE PROBLEMS IN SCIENCE,
ENGINEERING, AND MEDICINE WILL BE A
HAND. ROBOTS WILL RAPIDLY DISPLACE
HUMANS FROM FACTORIES AND FARMS

At the moment, computers show no sign of intelligence. This is not surprising, because our present computers are less complex than the brain of an earthworm. But it seems to me that if very complicated chemical molecules can operate in humans to make them intelligent, then equally complicated electronic circuits can also make computers act in an intelligent way.

—Stephen W. Hawking, physicist, 1998

Intelligent computers are now considered as inevitable as Moore's Law—the 1965 dictum predicting the geometric growth of semiconductor power. The lawgiver himself agrees. "Silicon intelligence is going to evolve to the point where it'll get hard to tell computers from human beings," says Gordon E. Moore, chairman emeritus of Intel Corp.

But computer intelligence won't stop there. Many scientists assert that machines will rapidly become far smarter than Albert Einstein and Hawking rolled into one. Just as humans can design computers with superior number-crunching capabilities, Hawking figures savvy machines will create still better computers. At least by mid-century, and probably much sooner, computers could have smarts way beyond our ken.

Silicon will even give birth to new kinds of life, predicts Robert E. Newnham, a materials scientist at Pennsylvania State University. And the advantages of this silicon life—chiefly immortality and unimaginable brainpower—could inspire scientists to forge composite human-silicon life forms "with a common consciousness that transcends all living beings."

A NIGHTMARE? These wild notions no longer come just from science-fiction writers. They're slowly creeping into mainstream science. And researchers are waking up to the implications of the monumental event that's coming within many of their lifetimes: our first contact with an alien intelligence.

The arrival of silicon life will transform civilization. All our science and art, even our concept of self, stems ultimately from what our senses tell us about the world. But beings that can see radio waves and listen to starlight, that can feel the vast empty spaces in atoms of steel, will have a very different perception of reality. What we learn from





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them could be more wondrous than all the discoveries made with microscopes, telescopes, X-ray machines, and other high-tech tools for amplifying our senses.

Some researchers fear super-brainy machines will be a science-fiction nightmare come true. Kevin Warwick, head of cybernetics research at Britain's University of Reading, is convinced that machines will subjugate humanity by 2050. And Hugo de Garis, head of a project to build silicon brains at Japan's Advanced Telecommunications Research Institute International (ATR), admits he is haunted by the prospect that his creations might "swat me like a fly."

Other researchers figure such beings would be too wise not to respect life in all its myriad forms. The idea of malevolent machines is based on the mistaken assumption that intelligent machines would behave pretty much like people, "foibles and all," scoffs Igor Aleksander, head of neural systems engineering at London's Imperial College of Science, Technology & Medicine. But sexless creatures that know they are machines and can exist essentially forever wouldn't be driven to compete for territory and mates—two main sources of human inhumanity and maltreatment of lower life forms. So, if supersmart machines come to regard people as unfit company, perhaps they'll just build cylinders around themselves and blast into space. Some may do so anyhow, seeking new knowledge, since space travel will be a breeze for them.

BRAINS IN A BOX. Either way, the human brain has only a short time left as the smartest thing on earth. The speed and complexity of computers will continue to double every 18 months through 2012. By then the density of computer circuits will have jumped 1,000-fold, and the raw processing power of a human brain will fit into a shoe box. With luck, that milestone might come a lot sooner—perhaps as early as 2005, says John C. Carson, chief technology officer at Irvine Sensors Corp., a Silicon Valley chip company.

Beyond 2012, chips that exploit the quirky world of quantum mechanics promise far bigger leaps in complexity. Because such chips won't need wires, which now occupy most of the space on silicon, it won't take long to duplicate a human brain fully—not only its 100 billion neurons but also its trillions of synapses, or interconnections. This dense maze of interconnections is regarded as essential for intelligence to emerge. Hardware brains will get there by 2020, predicts Raymond C. Kurzweil, founder of Kurzweil Technologies Inc.

“

We will have the raw computing power of the human brain—about 100 billion neurons and 100 trillion connections—in a \$1,000 PC by around 2019.... By 2030, a \$1,000 computer system will have the power of a thousand human brains; by 2050, a billion human brains.

”

RAYMOND KURZWEIL,
president
Kurzweil Technologies Inc.

Then they'll soar way past human ware." A billion human brains could so crammed into a cubic inch of quantum cuitry, Kurzweil says. And the size of art brains won't be constrained by the human skull. They could grow as big as trucks. Garis of ATR even sees brains the size of satellites orbiting the earth.

Critics contend that no matter how computers get, they can't become intelligent until we know how to emulate the brain functions in software. Not so, retorts Irvin Harvey, a mathematician turned roboticist at Britain's University of Sussex. By mimicking evolution, "it's possible to create artificial brains without really understanding how they work," he says. In other words, they will evolve their own internal programming, as human brains have.

ROBOTIC ROAD RAGE? These superbrains will change everything. Previously intractable problems in science, engineering, and medicine will be a snap. After 2025, Kurzweil says, robots will rapidly displace humans from factories and farms, and they'll provide basic human necessities to all people. Cars, planes, and trains will operate themselves, and the carnage on the highways will end in the 2030s.

Even the nature of human life itself will be changing by mid-century. Neural implants will expand human knowledge and thinking powers—and begin a transition to computer-machine relationships that will gradually phase out the need for biological bodies. Swarms of microscopic robots will take up residence in the brain's sensory areas and create virtual-reality simulations that are impossible to distinguish from real reality. Communicating with family and friends won't require your physical presence. The best food you've ever eaten can be enjoyed anytime and anywhere with different companions. And traveling to Mt. Fuji or the Louvre will be pointless, because your body won't be able to do or see anything that can't be provided by in-body simulations.

So, come 2099, Kurzweil figures only a very small group of people will still inhabit biological bodies. Most humans will have transferred their minds into electronic circuits—and attained immortality as a result (page 100).

Penn State's Newnham is sorry he won't have that opportunity, because he's already 70. "I would like to live such a life," Newnham says wistfully. "I would like to have the time to learn why life is, why we are here, why there is matter, and why the universe exists. I'd like to know those answers."

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13

The risk of disease
will be treated as a disease

H E A L T H

by Catherine A.

**GENETIC TESTING WILL
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PARTICULAR ILLNESS.
WE WILL TAKE PILLS
TO LOWER THE RISK.
BUT THE PILLS
MAY HAVE SIDE EFFECTS.
AND THERE MAY BE
PRESSURE—FROM
INSURANCE COMPANIES,
EVEN FROM EMPLOYERS
—TO TAKE THE
PREVENTIVE MEDICINE
EVEN IF WE DON'T
WANT TO. OUR CHANCES
OF SURVIVAL MAY BE
GREATER. THE COSTS
OF SURVIVAL
MAY BE AS WELL**

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THE PLACE FOR YOUR PC

because genetic tests show you have a higher-than-average likelihood of developing this particular disease. The pills could help improve your odds.

Think of it as the medicalization of daily life. In the 21st century, the mere risk of disease will be treated as a disease: something to be carefully monitored and corrected. The emerging field of chemoprevention is already developing pills to ward off a range of diseases, from various kinds of cancer to diabetes to osteoporosis. The pill takers will be those who have a genetic predisposition to an illness or have other risk factors, such as a weakened immune system or exposure to carcinogens.

HEAD TO HEAD. The chemoprevention principle has already been proven: Recent clinical trials have revealed that two estrogen-like drugs, tamoxifen and raloxifene, reduce the chances of breast cancer in high-risk women by more than 50%. The American Society of Clinical Oncology now recommends daily doses of tamoxifen for any woman over 35 whose chance of getting breast cancer in the next five years is 1.7% or higher. (The calculation is based on family history, reproductive history, and the number of biopsies.) And the National Cancer Institutes is just starting the biggest chemoprevention study ever, enrolling 55,000 women to compare tamoxifen and raloxifene head to head.

But is there such a thing as being too cautious? Preventive methods, after all, can carry their own problems. Tamoxifen taken over time, for example, slightly increases the risk of endometrial cancer and heart disease. "To give such

“For years people have tried to find the right treatment for breast cancer, but it continues to kill. So why not come up with a way to prevent it instead of treat it?”

ALEXANDRA HEERDT, M.D.,
Director of Special
Surveillance Breast
Program, Memorial Sloan-
Kettering Cancer Center

a powerful drug to healthy women with a relatively low risk is simply too dangerous,” complains Helen Schiff, a breast-cancer patient advocate.

Yet patients could find themselves losing control over such decisions. It's easy to imagine that insurance carriers would require high-risk customers to take preventive medicine, whether they want to or not. At the other extreme, will health maintenance organizations refuse to pay for the pills if they don't think the patient's risk is high enough? Will mortgage companies refuse to lend to high-risk patients who don't take pills? Will employers refuse to hire them?

Those questions presume that insurers and employers know about your elevated risk. They won't if genetic-test results are kept private—as many physicians hope. “Otherwise, this could be a huge, huge problem,” warns Dr. Raymond N. DuBois, director of the cancer prevention program at Vanderbilt University in Nashville.

Even if no one knows about your genetic Achilles' heel but you, there are still issues to face. Will people engage in high-risk behavior—smoking, for example—if they know there's a pill to prevent lung cancer? There are indications they might: Studies have shown that people who drive sport-utility vehicles are sometimes more reckless than those in more vulnerable cars—because they think they are safer.

Doctors in the field argue that chemoprevention should be thought of as just another way to stay healthy, like exercising and eating right. “Why is it so bad to offer another option?” asks

Dr. Alexandra S. Heerdt, director of the special surveillance breast program at Memorial Sloan-Kettering Cancer Center in New York.

Plenty of such options are certain to come along. “Given the rapidly growing understanding of the biological underpinnings of disease, I expect to see much more effective agents in the next two decades,” says Dr. Victor G. Vogel, a professor of medicine and epidemiology at the University of Pittsburgh School of Medicine. “It's a matter of finding the better agents and how to administer them. That is certainly going to happen.”

TAKE AN ASPIRIN. In fact, it's already happening. The most likely prevention candidate after breast cancer is colon cancer, which killed almost 48,000 Americans in 1998. Several studies indicate that taking aspirin or ibuprofen cuts the risk of developing colon cancer in half, and clinical trials are under way to test the newer COX-2 drugs against the disease.

The NCI is also conducting a clinical trial to see if Merck's drug finasteride, now used to treat prostate cancer, can also be used to prevent it. For people at risk of developing insulin-dependent diabetes, there's a federal study to see if giving insulin to symptomless people can delay the onset of the disease. And genistein, a component of soy, is being studied as a lung cancer preventative.

Chemoprevention raises difficult questions. How do you decide between living with poor odds and dealing with the costs, hassle, and possible side effects of long-term pill usage? In the next century, it could well be the biggest decision you'll make about your health.



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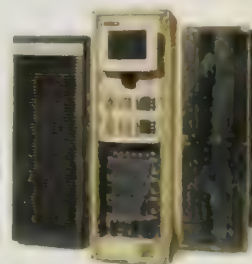
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...eter answers.™

14

The earth will don an electronic skin.

I N T E R N E T

by NEIL GROSS

The skin is an uncanny piece of engineering. It processes immense amounts of data on temperature, pressure, humidity, and texture. It registers movement in the air, gauges the size of objects by the distance between points of contact, alerts us to danger, and prepares us for pleasure. But the skin does more than register superficial events—it's a controller. It sends signals to regulate blood flow, activate sweat glands, alert immune cells to marauding invaders, and block ultraviolet light. Even when skin dies, it is utilitarian: Dead cells accumulate in layers to prevent unwanted penetration.

In the next century, planet earth will don an electronic skin. It will

**TODAY, SILICON
NETWORKS LOOK
NOTHING LIKE THE BRAIN,
BUT NODES OF THE
INTERNET HAVE BEGUN TO
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EXPECT SPONTANEOUS
COMPUTER NETWORKS TO
EMERGE, FORMING A
'HUGE DIGITAL CREATURE'**

use the Internet as a scaffold to support and transmit its sensations. This skin is already being stitched together. It consists of millions of embedded electronic measuring devices: thermostats, pressure gauges, pollution detectors, cameras, microphones, glucose sensors, EKGS, electroencephalographs. These will probe and monitor cities and endangered species, the atmosphere, our ships, highways and fleets of trucks, our conversations, our bodies—even our dreams.

Ten years from now, there will be trillions of such telemetric systems, each with a microprocessor brain and a radio. Consultant Ernst & Young predicts that by 2010, there will be 10,000 telemetric devices for every human being on the planet. They'll be in constant contact with one another. But the communication won't be at our plodding verbal pace. "Fifty kilobits per second is slow," huffs Horst L. Stormer, a Nobel prize-winning physicist employed by Lucent Technologies Inc.'s Bell Laboratories and Columbia University. Machines will prefer to talk at gigabit speeds and higher—so fast that humans will catch only scattered snippets of the discussion.

What will the earth's new skin permit us to feel? How will we use its surges of sensation? For several years—maybe for a decade—there will be no central nervous system to manage this vast signaling network. Certainly there will be no central intelligence. But many scientists believe that some qualities of self-awareness will emerge once the Net is sensually enhanced and emulates the complexity of the human brain.

Sensuality is only one force pushing the ►

Skin capillaries and satellite photo over Sudan.



Net toward intelligence. An eerie symbiosis of human and machine effort is also starting to evolve. The Internet creates a channel for thousands of programmers around the world to collaborate on software development and debugging. That has produced an evolutionary leap in software: The "open source" movement that spawned the Linux operating system. The Linux world behaves as an ecosystem—"a self-correcting spontaneous order," as open-source pioneer Eric Raymond describes it in his Net manifesto, *The Cathedral and the Bazaar*. Through collaboration, this community can push past the technical barriers to machine intelligence.

And though silicon networks today look nothing like the brain, nodes of the Net have begun to function as neurons. Researchers have already tackled complex computing problems, such as interpreting interstellar radio signals, by parcelling computing tasks out to about a million PCs working in concert. Within 10 years, discrete microprocessors could be knitted together into ad hoc distributed computers. Don't think of these as PC networks. The terminals would just as likely be cell phones or Palm-like devices, each one far smarter than today's heftiest desktops. "Think of this as a whole ecology, an information environment that's massively connected," says Ernst & Young Chief Technologist John Parkinson.

COMPUTER CLANS. Such spontaneous computer networks would be ideal breeding grounds for so-called "emergent" phenomena. The concept is championed by the Santa Fe Institute, intellectual home of physicist Murray Gell-Mann, computer scientist John H. Holland, and other architects of a discipline called "complexity." This school studies behavior that emerges from the collective activity of partly independent agents. Individual ants, for example, can't fight off an attacking wasp, but a colony can. A single brain cell is a simpleton, but a few tens of billions can perform mental miracles.

Complexity experts anticipate the occurrence of such phenomena on a Net that will someday comprise billions of smart devices, each linked through thousands of pathways. The whole will add up to more than the sum of its parts, says Sandia National Laboratories Senior Scientist Gerold Yonas. "At some point, a massively parallel computer will reconfigure itself," he predicts, and portions of the Net will take actions that no human engineer programmed or even planned for.

Humans won't be removed from the process, says Leonard Kleinrock, inventor of packet switching technology and architect of the Net's first node, 30 years ago at the Uni-

“Wireless sensors will go anywhere and measure anything—traffic flow, water level, number of people walking by, temperature. This is developing into something like a nervous system for the earth, a skin for the earth. The world will evolve this way. It's not engineers who are going to decide.”

HORST STORMER,
physicist, Lucent
Technologies Inc.

versity of California at Los Angeles. "Millions of people contributing ideas in unforeseen ways are part of this complex adaptive system," he says, pointing to the open-source movement as proof.

Now, toss into this ecosystem a few hundred million intelligent software agents, vastly more powerful than the crude software "bots" that perform Web searches today. Add the voices and intentions of a few billion digital pets, companions, and caretakers. They stretch out a sensory, telemetric fabric. The network itself becomes a huge digital creature," says Toshitada Doi, chairman of Sony Corp.'s Digital Creatures Lab. "We will carefully design it so that it will help humans, not harm them."

That may not be easy, however. Emergent behavior could be mischievous, even sinister. In Sandia simulations with software agents acting as communications nodes in networks, the nodes have assembled themselves into clans. "In a real network, the clans might have distinct points of view," Yonas says, "but one might be antithetical to another."

SELF-HEALING NETWORKS. By the time something like that happens, networks should gain some of the resilience and safeguards of living organisms. For a start, "networks will learn to heal themselves," says Sprint Chief Technology Officer Martin J. Kaplan. And when earth's own skin signals danger—seismic activity, a geomagnetic storm, or a worrisome spike in financial transactions—the Net will sense it, alert people, and reroute traffic.

Critics of the Santa Fe school say it lacks a solid theoretical foundation. Supporters concede that point, but say the field is still nascent. "This is 21st century science," says William Joy, founder and chief scientist of Sun Microsystems Inc.

Humanity is now preparing to cast its net across the solar system. At NASA's Jet Propulsion Laboratory in Pasadena, Calif., scientists are devising a version of the Internet called InterPlaNet that will weave the moon, Mars, and some asteroids and comets into the earth's expanding nervous system.

Today's communications between earth and unmanned probes are expensive, proprietary, and complex. With InterPlaNet, "We can simplify everything, cut costs, and engage the public more effectively," especially when astronauts arrive on Mars, says JPL team leader Adrian Hooke, manager of space data systems. Then, the earth's telemetric body will span the reaches of the solar system. The earth may not experience all the human thrills of exploration. But it will feel some tingles up and down its spine.



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15

In the new financial cosmos, it will be safer to take a dare

M O N E Y

by PETER CO

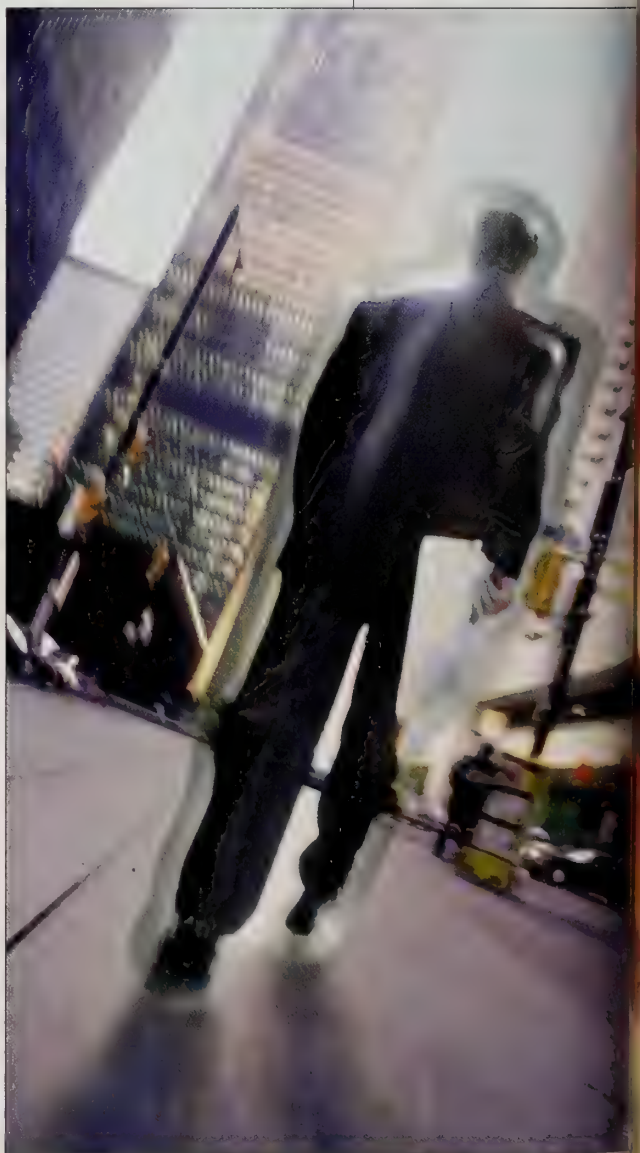
Think of the invisible losses that society suffers because of fear of failure: the brilliant careers that are never attempted, the great companies that are never launched, the products that are never produced. Society won't eradicate fear of failure in the 21st century. But it will do the next best thing: It will devise new kinds of financial instruments—new hedges—that will reduce the riskiness of new ventures. By so doing, it will embolden a new generation of smart but cautious entrepreneurs to pursue their dreams. All of us will benefit from

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TO TAKE THE PLUNGE**

the creativity this will unleash. The new financial instruments won't protect people from their own stupid mistakes. Instead, these hedges will insulate people from events outside their control that could affect their chosen careers, industries, or even countries. That will make people more the masters of their own fates.

"It will encourage people to take risks, because the risks will no longer be concentrated exclusively on them," says Yale University economist Robert J. Shiller, author of a 1993 book on the topic called *Macro Markets: Creating Institutions for Managing Society's Largest Economic Risks*.

To see how this will work, consider the example of a hedge against choosing the wrong career. Today, a young man or woman could spend years training to become a cardiac surgeon, only to be whacked by, say, a harsh new malpractice law that makes cardiac surgery an unattractive profession. Uncontrollable risks of that sort are undoubtedly frightening away some young people who would have made excellent cardiac



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surgeons—producing a loss for society as a whole.

Now imagine that in the 21st century, there will be a market where hedgers and speculators meet to trade “cardiac-surgeon-income futures,” analogous to today’s futures contracts on soybeans and interest rates. Our newly minted surgeon could short-sell some of those futures—in effect, betting against her own profession. If cardiac surgery is hurt by some external event, profits on her short sale would compensate for the decline in her salary. If she doesn’t

want to mess with short-selling, she could simply deal with an insurer that would then lay off its own risk in the futures market. Once she is hedged, her future income will reflect her own skills in the operating room rather than, say, some piece of legislation.

Career hedges are just one example of this broader application of risk-buffering. It will also be possible to hedge against a decline in the value of houses in your area. People might be more willing to spruce up their homes or buy houses in

chancier neighborhoods if they could protect themselves against a slide in the local market.

Or how about a hedge based on national economic performance? An Argentine could receive a payoff if Argentina’s economy hit the skids. That might encourage bright people to build a life in Argentina rather than emigrating.

Hedging a career, a neighborhood, or a country may sound exotic. But it’s no more than a 21st century twist on the old injunction that you shouldn’t keep all your eggs in one basket. ■

16

The ‘little emperors’ can save the world’s aging population

DEMOGRAPHICS

by PETER C.

Pyrarnid schemes start in smirks and end in tears. The early joiners put in a little money and get back a lot because they’re paid with the contributions of later joiners. Inevitably, though, the pool of new recruits runs dry. The last people in—the big suckers—lose everything. When the original Ponzi scheme went bust in 1920, namesake Charles A. Ponzi went to prison.

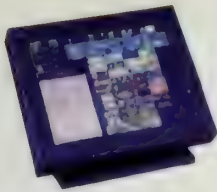
Now, consider this: Modern society itself is an enormous Ponzi scheme. It wasn’t for most of humanity’s time on earth, when the population barely grew. But since the Industrial Revolution began some 250 years ago, each generation of humanity has been bigger than the one before it. The Ponzi quality of society is most obvious in social security systems, which funnel money from new joiners (workers) to the people who joined the system earlier (retirees). Population growth makes it work.

The trouble starts when population growth begins to slow at the same time that retirees are staying alive longer. World population doubled, to 6 billion, over the past 40 years, but it will increase at a much slower rate, to about 8.9 billion by 2050, according to a projection of the United Nations. And it may even shrink. In the U.S., the number of working-age people per retiree has fallen from eight to five—and it is headed toward three.

Fortunately, there is a way out of this demographic dilemma. In fact, there are billions of ways out: our children, our grandchildren, and our great-grandchildren. The children of the 21st century will be from smaller families. Many will have no siblings at all, like the pampered “little emperors” who were born under China’s draconian one-child policy. If these children can compensate for their small numbers with high productivity, they will create so much wealth that there will be plenty for themselves and their numerous elders. They will rescue the world from its Ponzi scheme.

The key is what demographers refer to as “quality over quantity.” In days gone by, parents had lots of children because they needed the extra farmhands. But in a technological society, the key to success is education. By having fewer children, parents ►

**HOW WILL A SHRUNKEN
GENERATION OF FEWER
MORE PAMPERED
CHILDREN WORLDWIDE
SUPPORT THEIR RETIREE
ELDERS? BY USING THE
EXTRA EDUCATION,
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Urban Chinese parents have responded to the one-child rule by investing heavily in their solitary children. The fate of their world may depend on their children's ability—and willingness—to return the favor

can lavish more attention and a better education on each one. And society as a whole benefits: An educated, productive person creates more wealth—and pays more in taxes. For countries as well as for families, “quality rather than quantity is the name of the technological game,” explains Brown University economist Oded Galor.

To be sure, there comes a point where all the quality in the world can't make up for a lack of quantity. In Japan and most of Western Europe, the average woman has fewer than 1.5 children in her lifetime, a dangerously low level. In the U.S., the total fertility rate is 2.0, roughly the number needed to maintain long-term population stability, so further declines would be negative. But for most of the world's population, falling fertili-

ty rates are still a positive economic force. Explains John P. Bongaarts, vice-president of policy research at the Population Council, New York think tank. “In the developing world, a reduction in the birth rate has a powerful economic effect,” he points out. “It produces a better-equipped labor force and more savings.”

People invest more in human capital only when they have fewer children but they expect each child to live longer. Education is more worthwhile if you have more years to use it, notes John D. Mueller, an economist at Lehrman Bell Mueller Capital Inc., a financial-forecasting firm in Arlington, Va. In turn, says Mueller: “The boom in human capital spurs a boom in physical capital, because better-educated workers have better tools to work with.” Today there are 11 retirees per 100 working-age people in the world. The U.S. Census Bureau projects that there will be 25 per 100 by 2050. That could be offset with an additional 1.5% in annual productivity gains. A step-up in productivity should be easily achievable if less-developed nations continue to catch up.

DEMOGRAPHIC BLOWUP? For an early reaction on whether the little emperors can save the world, visit China. Its total fertility rate is the lowest in the developing world because of the one-child policy imposed by Communist government on urban families over the past 20 years. By messing with Mother Nature, China is risking a demographic blowup in a few decades, when its shrunken current generation must support its retired elders.

Luckily, urban Chinese parents have responded to the one-child rule by investing heavily in their solitary children. On the other hand, that means these little emperors are spoiled, says Sun Yuxiao, deputy director of the China Youth Research Center in Beijing. “Their mentality is that parents should always take care of their children. They don't have the concept that someday, one should take care of one's parents.”

On the positive side, however, Sun says the little emperors are, for the most part, ambitious, confident, and more willing than their elders to challenge arbitrary rules. In balance, he says, he is optimistic: “Too many single children will become the most capable generation in China's history.”

It's only a slight exaggeration to say that the fate of the world rests on the shoulders of the little emperors of China, the *unicos* of Spain, the spoiled brats of the U.S. Intergenerational harmony depends on whether they can compensate for their smaller numbers with brilliance. Of course, even if they do thrive, there's no certainty that they will share their bounty. If wealth helps. As Charles Ponzi could tell you, it's a lot easier to split a big pie than a small one.



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17

Democracy goes direct—again

POLITICS

by RICHARD S. DUNHAM

**IN MANY WAYS, IT'S
BACK TO THE 1830s.
CANDIDATES WILL
CANVASS VOTERS
IN THEIR HOMES;
CITIZENS WILL
QUESTION POLITICIANS
IN PUBLIC FORUMS.
THE BIG DIFFERENCE:
IT WILL ALL
TAKE PLACE ON THE
INTERNET. THE DANGER:
NET-BASED
SPLINTER GROUPS
COULD FACTIONALIZE
PUBLIC LIFE**



When Alexis de Tocqueville traveled across the U.S. in the 1830s, the French social observer was struck by both the interest and influence of average citizens in the electoral process. "The American people reign over the American political world as God rules over the universe," he wrote in his famous book, *Democracy in America*.

Today's voters are feeling less potent than those of de Tocqueville's time. The game now in politics is to raise enormous amounts of money from special interests and then spend it on gobs of TV advertising—in which candidates are packaged

like beer. Victory goes to the best mass marketer.

But politics is changing once again. Look ahead a few years, and it could well resemble what de Tocqueville saw. The

Information Revolution is likely to democratize politics by weakening the elites' grip on information. American voters, instead of being passive recipients of news and advertising from

a few TV networks and national publications, will receive information from hundreds of competing sources, such as E-mail and Web sites. What's more, interactive media will let them talk back.

In de Tocqueville's America, politics was rowdy and personal: torchlight parades, hard cider, and partisan shouting matches, public debates. It became rather sanitized and distant in the 20th century. But

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it's getting personal again. In the 21st century, the masses will attend campaign events in cyberspace and exchange insults in online chat rooms. "There is a huge amount of pent-up political expression in America today that will democratize our culture," says Cincinnati marketing-communications executive Richard A. Segal Jr., the Web guru for Republican Presidential candidate Steve Forbes.

The new style of campaigning doesn't take money out of politics. Segal, a master of targeted E-mail lists and other Information Age tools, is using them to drum up support for Forbes, who is hardly a man of the people. Rather, what's going away is the tight link

between moneyed interests and the traditional apparatus of party politics. In the ascendancy are single-issue groups that can mobilize their troops with a computer keystroke, and coalitions around causes or candidates. "It ends up weakening institutional structures," says White House Chief of Staff John D. Podesta. "That's bad news for party discipline and good news for creativity."

This disruption of the status quo is not all to the good. For nearly two centuries, two major parties have moderated the public's passions because neither has dared stray too far from the center. If the parties splinter, the U.S. could wind up with a fractured, stalemated

Congress and a President preferred by only a small portion of the electorate. To avoid obsolescence, the Democrats and Republicans themselves will have to harness technology to build cohesive blocs of voters from splinter groups.

De Tocqueville would surely recognize the democratic bent of the new politics. "There is not a country in the world," he declared in 1831, "where man more confidently seizes the future, where he so proudly feels that his intelligence makes him master of the universe, that he can fashion it to his liking." "In essence," says Democratic consultant Dane Strother, "it's back to the future." ■

18

Kids were right all along High school is obsolete

E D U C A T I O N

by RICHARD A. MELCHER

SHOULD KIDS HEAD FOR COLLEGE WHEN THEY'RE 15 OR 16? SOME EXPERTS THINK SO, AND SOME KIDS AGREE. THEY ARGUE THAT THE LAST TWO YEARS OF HIGH SCHOOL JUST KEEP STUDENTS IN A HOLDING PATTERN, WHEN MANY ARE INDEPENDENT ENOUGH TO BE STARTING THEIR ADVANCED EDUCATION

Abolish high school. Start secondary education in seventh grade and end it after tenth. Then release the kids at age 15 or 16 so they can get a faster start on the rest of their lives.

The idea isn't as crazy as it might sound. For many young people, high school is little more than a holding pen. Teenagers mature physically earlier than they did a century ago, while cars and the Internet have given them far more independence than their predecessors.

Yet most high schools continue to treat their charges like children.

Segregated from the rest of society, students turn obsessively toward each other, forming cliques and agonizing over who is most popular or beautiful or cool. "This is way out of date and incongruous with their real lives," says Leon Botstein, president of Bard College in Annandale-on-Hudson, N.Y., the best-known advocate of abolishing high school.

GETTING A LEG UP. High school wasn't always considered a near-mandatory rite of passage. As recently as 1940, less than 50% of the adult population had gone beyond the eighth grade. Now, nearly 90% of adults age 18 to 24 have a high school degree. Little wonder: High schools teach some useful social and rea-

soning skills, and give graduates an economic leg up.

Shortening high school needn't mean dumping down the population—or necessarily sending kids off the college track. Botstein guesses that the high school overhaul should be accompanied by higher expectations, forcing grads to be adept in everything from civics to economics. Those who are ready should go to college. Teenagers who don't care for university life—or want to delay it—could take apprenticeships, engage in public service, or attend vocational schools.

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would mean a two-year jump on Economics 101 or organic chemistry. There is a precedent for that: In the 1930s, University of Chicago President Robert Hutchins encouraged kids as young as 15 and 16 to come to his school. The experiment lasted about two decades, and then ended when GIs returning from World War II were sitting in classrooms with teenagers.

University of Chicago labor economist James J. Heckman

agrees with Botstein that compressing high school is "a compelling idea." He argues that "high schools have become very lethargic institutions," and he adds that the sooner adolescents are introduced to the real world, the better. Heckman also raises a key caveat: Educators need to have some way to evaluate students' maturity before moving them along.

That seems to be one risk in cutting students loose



at sooner. Many adolescents really do need to be closely supervised. If you're not convinced, just listen to a certified pediatrician, Renée Witherspoon, who graduated this year from Morgan Park High School in Chicago: "They may be tired or rebellious, but they are not mature." The solution could be for less or vocational schools that admit 15- and 16-year-olds to serve *in loco parentis* more than they do with older adolescents.

Or shall we let high school keep rolling along, as it has from year to year, even generation to generation? Pep rallies. Pop quizzes. Proms. "There was a sort of rhythm that became familiar, a sense that we had seen much of this before," recalls Lauren Gutterman, a 1999 grad of New Trier High School, in the middle-class suburbs north of Chicago. Been there, done that. Adolescence is no time to be lulled to sleep. Not when a new century beckons.

"Day One" Investigations: Crucial After A Catastrophe Strikes

THE FIRST 24 HOURS AFTER A CATASTROPHIC EVENT ARE THE MOST IMPORTANT. AN EXPERT FROM GAB ROBINS' ENGINEERING AND FIRE INVESTIGATIONS EXPLAINS WHY.

When disaster strikes, Dr. Michael Weyler, vice-president of mechanical engineering at Engineering and Fire Investigations, is often first on the scene. A wholly-owned subsidiary of GAB Robins North America,

EFI specializes in investigating such events for a wide range of clients. Weyler, a practicing engineer for 37 years and a catastrophe expert for nine years, talks about how he works with clients to reduce their exposure in the event of a disaster.

Q: What events do you investigate?

A: We get called in on catastrophes such as refinery explosions, industrial fires, structural collapses, and heavy equipment failures. What these events have in common is that they usually involve fatalities or injuries, as well as heavy damage to property. As a result, liability exposure is often very high.

Q: Why is the kind of "day one" investigation that you do so important?

A: In catastrophic situations such as

those I've described, it makes economic sense to have an engineering expert on site as quickly as possible. When a company calls us in immediately after an accident, all of the evidence is fresh. We are able to piece together what has happened from physical materials, as well as from eyewitness accounts. If this kind of investigation is not done up front, a variety of alternative theories often take root as time goes on—theories of causation that may not be based on all the facts. By being on site as soon after an accident as possible, we can develop a clear picture of what happened, and when. And this factually-based picture helps keep down the expenses associated with developing a case, as well as having a favorable impact on ultimate settlement amounts.

Q: Do police and fire department officials collect evidence?

A: Yes, they do, and we often work closely with those officials on these cases. However, the purposes of our investigations are different, and

so naturally I would be looking for different kinds of pieces of evidence than a police department official would. For example, in the World Trade Center bombing, the authorities were focused on

tracking down how the building was bombed and establishing who the bombers were. On the other hand, we were looking at how the smoke had spread through the building and how the shock waves had damaged the building's structure. To understand these things, we had to perform our own analysis.



Dr. Michael Weyler,
VP Mechanical
Engineering at EFI

Q: What should we do if our company is faced with a traumatic event?

A: Of course, the first concern should be on saving lives and preventing injuries. But once these aspects of such an event are under control, a catastrophe-experienced engineering consultant should be called as soon as possible. It is usually helpful to have someone assigned to call a qualified engineering expert who you'll want to identify well in advance of an incident occurring. This should be spelled out as part of a company's overall disaster response. In some cases, this is the local operations manager, and in others it is the corporate risk manager.

To reach EFI for engineering assistance in an emergency, dial 888-888-2467. For further information about GAB Robins' full range of Catastrophe Services, please visit our Web site at www.gabrobinsna.com.

Clara Van Hast, a New York-based writer, reports frequently on insurance and risk management.



To determine the factors which led to an overwhelming catastrophe like this refinery explosion, it is critical that expert investigators arrive on the scene quickly, before badly damaged materials, like the crumpled tanks and bent pipes evident here, have been moved or destroyed.

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19

We'll have all the genetic pieces. Next, we'll assemble the jigsaw puzzle

G E N E S

by JOHN CARL

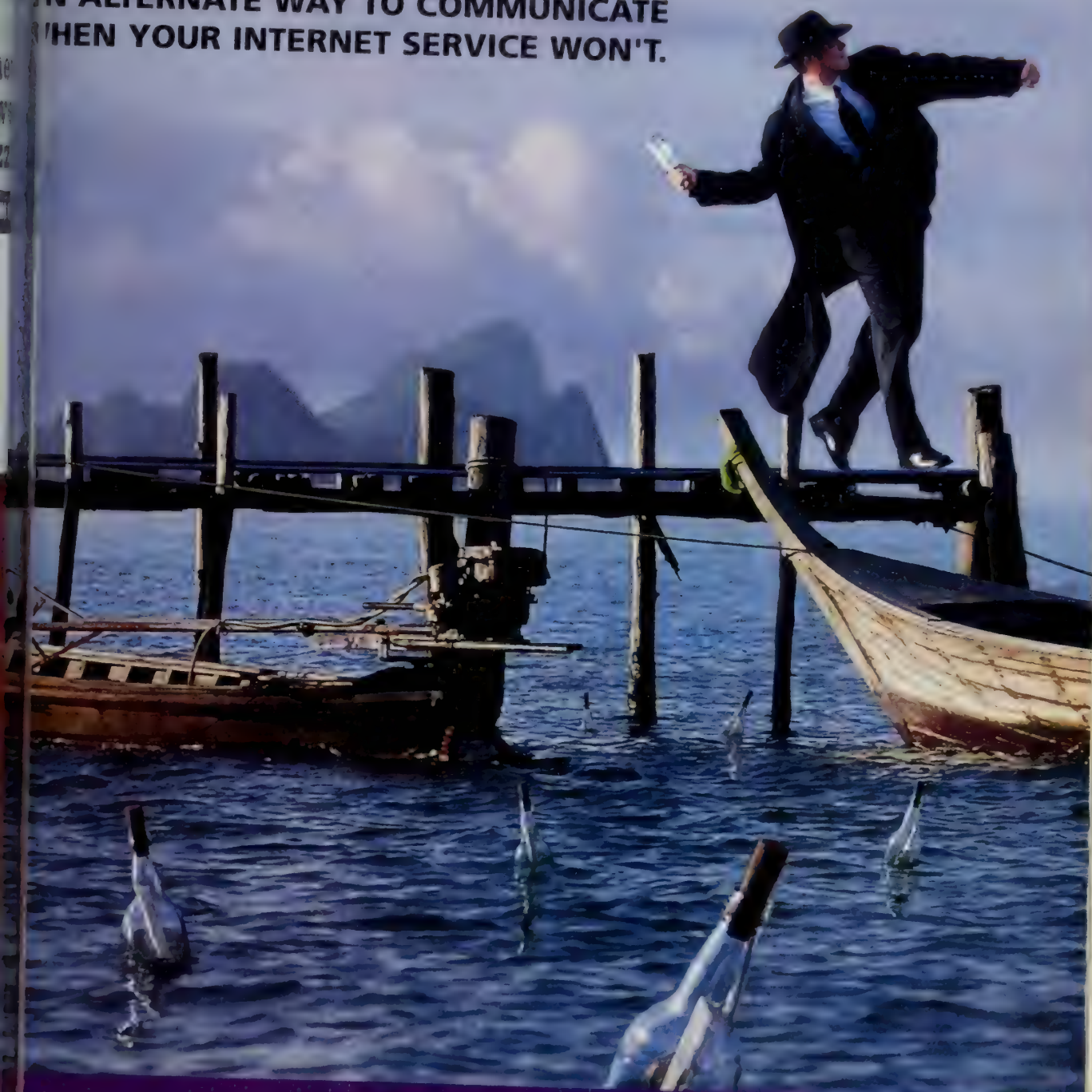
In the first few years of the 21st century, science will finish one of the monumental tasks of all time—deciphering the blueprint of human life. To the intrepid explorers of biology's secrets, the unlocking of genetic codes of many organisms is akin to exploring new planets. "We had been looking under the lamppost," explains parasitologist Michael Gottlieb of the National Institutes of Health, who is mining

AS BIOLOGY'S DEEPEST MYSTERIES ARE FINALLY REVEALED, MEDICINE WILL BE THE FIRST BENEFICIARY. NEW DRUGS THAT CONQUER ALZHEIMER'S DISEASE, VACCINES TO WIPE OUT AIDS, AND CROPS PACKING VACCINES WILL BE AMONG THE FRUITS OF THESE DISCOVERIES



The letters on this woman's body represent a tiny part of the genetic code of a gene that causes breast cancer

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the genes of the malaria parasite to find new ways of fighting this global scourge. "Now, we are illuminating everything."

But this powerful new light is as humbling as it is intoxicating. When Nobel laureate Hamilton O. Smith and genomics pioneer J. Craig Venter finished decoding the first complete sequence of a free-living organism in 1995 (*Haemophilus influenzae*), they were stunned to find that half of the bug's 2,000 genes were completely unknown to science. Even now, no one knows how the genes work together to make a living organism. If science can't fathom a lowly single-celled microbe, asks Venter, "how are we going to understand the 80,000 human genes, working together in 10 trillion different combinations?"

GENETIC FLOOD. Eventually, the genome projects will bring a revolution in medicine and biology. But it's not going to happen as fast as many believe. "Most miracles are going to come from unknown genes and unknown functions that are going to take decades and decades to understand," Venter says.

The good news is that researchers are beginning the enormous task of making sense of the flood of new genetic information. Just drop in on the labs at Myriad Genetics Inc. in Salt Lake City. Scientists there are screening hundreds of thousands of proteins to see how they interact and what they do.

The results are full of surprises—and opportunities. While studying a protein capable of suppressing brain tumors, for instance, the Myriad team found that it attaches to a second, scaffold-like protein. That scaffold, in turn, binds to a third protein, which acts like a switch to turn the tumor suppressor on or off. With that discovery, the company has opened the door to a new tactic for fighting cancer—perhaps within about 10 years.

Charting the complex network involving a known gene is plenty difficult. Figuring out the functions for the tens of thousands of unknown genes is even tougher. Botanists have long heralded an age of genetically engineered crops that can survive droughts, for instance, or vegetables engineered to contain vaccines. But before this can happen, botanists must find the right genes to add. And right now, "we know practically nothing," says plant biochemist Hans J. Bohnert of the University of Arizona.

That's why Bohnert and colleagues are disabling, one by one, the genes of a mustard plant called *Arabidopsis*. Next, they are exposing the plants to a range of different conditions, like drought or high temperatures. If a mutant fails to survive, the scientists can infer that the gene it is missing is vital for

In the next 5 to 10 years, we'll make the basic discoveries that will drive science for the next century. It will be the basic material that we will study for the next 1,000 years, and an enormous change in the human condition will come from it

those conditions. Already Bohnert's lab found 2,500 gene sequences linked with ability to withstand salty environments. Many of them were previously unknown to science—and they may hold keys to the century's supercrops.

The same ability to discover the secret genes will radically change drug development. Thanks to evolution, "the biochemistry of fruit flies or the worm *C. elegans* is amazingly similar to that in human diseases," explains George A. Scangos, president and CEO of Exelixis Pharmaceuticals Inc., in San Francisco. Exelixis researchers are mating strains of fruit flies with, say, tumor diabetes-like defects. Then they mutate thousands of the flies' other genes, searching for those that change the bugs' fate. "We're able to find genes that restore normalcy to genes that make the defect worse," says Scangos. That gives drugmakers whole new targets and approaches for tackling disease.

As biology's deepest mysteries are finally revealed by the onslaught of 21st-century science, medicine will be the first beneficiary. New drugs that conquer Alzheimer's disease or cancer, vaccines to wipe out scourges like malaria and AIDS, and a second green revolution—with crops packing both extra nutrients and drugs—will be among the fruit of these discoveries.

Ultimately, new knowledge brings power more than just fight disease. Scientists foresee an ability to manipulate life in ways only dreamed—or feared—before. William Haseltine, chairman and CEO of Human Genome Sciences Inc., for instance, believes that by manipulating the body's biochemistry, we will be able to repair and rejuvenate cells and organs. "The fountain of youth is likely to be found within our own genes," he predicts. "Cellular replacement may keep you young and healthy forever."

BIOTECH WIZARDRY. The same biotechnology also will allow us to alter evolution. Princeton biologist Lee Silver predicts the creation of superspecies genetically enhanced for physical prowess or superior intelligence.

But who will make decisions about how to exploit these new capabilities? How will society as a whole acquire the knowledge and ethical sophistication to make the right choices, when we can barely resolve today's less complex debates about gene-modified plants and animal cloning? Given past human history, it's clear that we will find the right answers. Some of next century's great challenges will be dealing with the awesome power that will become ours as we slowly read the surprising story in our twisting strands of DNA.

TONY L. WHITE,
chairman, president, and
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20

The nomads shall inherit the airport lounge

L I F E S T Y L E

by DIANE BR

THE 21ST CENTURY BELONGS TO THE FLEET OF FOOT. PEOPLE WILL THINK NOTHING OF MOVING TO NANJING, THEN NAIROBI, AND THEN NEW YORK IN SEARCH OF RICHES. FORGET ELLIS ISLAND. THE RICHEST CAN BECOME TAX EXILES, PLEDGING ALLEGIANCE TO NO FLAG EXCEPT THE ONE FLYING OFF THEIR BOAT. OTHERS WILL STAY PUT BUT WILL BECOME ECONOMICALLY AND SPIRITUALLY DETACHED FROM THEIR HOMELAND AS THEY MAKE THEIR LIVING ABROAD. TECHNOLOGY HAS NOT FREED ROAD WARRIORS LIKE JOHN GRUETZNER (NEXT PAGE) FROM THE CONSTRAINTS OF TRAVEL. IT HAS FREED HIM FROM STAYING AT HOME



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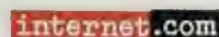
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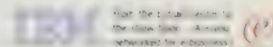
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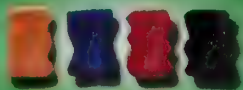


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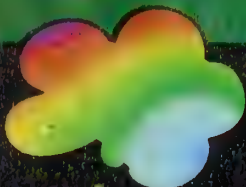


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John Gruetzner

POSITION: Executive vice president, Intercedent Ltd., an Indian consulting firm with offices in Toronto, Beijing, and Hong Kong.

HOME: Lives in Toronto and travels two-thirds of his time consulting throughout Asia and North America.

CONVERSATION STARTER:

Wakes up to ask his seatmate where the plane is landing. Seventeen flights in two weeks have left him confused.

ONE HORRID WEEK:

a) Leaves Singapore with the flu. b) Arrives home in Toronto to discover that a frozen pipe has burst. c) Immediately boards a plane to Chicago for two days of teaching. d) Back to

Toronto. e) On to Detroit, battling jet lag and the flu. f) Back to Toronto, running through the Detroit airport "like O. J. in the Hertz commercial" and throwing his briefcase into a closing door. g) Takes brief break in flooded house before boarding another plane to China.

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NOMAD MOTTO: "We always describe ourselves as 21st century grape pickers with fewer social problems." ■

21

**The toughest problems
will be solved
with a roll of the dice.**

QUANTUM COMPUTERS

by EVELYN L. WRIGHT

**PHYSICISTS HOPE TO USE
SUBATOMIC PARTICLES'
IMPRECISE NATURE TO
ANSWER QUESTIONS
BEYOND THE REACH OF
TODAY'S COMPUTERS**

Electrons would make terrible golf balls. They're just too ill behaved. When an ordinary golf ball rolls across the green and comes to a stop, it's either in the hole or it's not. An electron, on the other hand, can be in many places at once—in the hole, beside it, or at the edge of the green. Like all submicroscopic particles, an electron tends to spread itself out in a sort of hazy "cloud" of probability that's impossible to keep track of where it is at every moment. With quantum mechanics, we can work out the probability that an electron

is at a given spot, but the electron won't settle on a single location until something forces it to. An unruly mix of chance and imprecision would ruin a golf game. But physicists and computer scientists are finding that they can harness it to crack problems that were long thought unsolvable. The resulting quantum computers—when they may be available in some 10 to 20 years—will speed drug discovery, let forecasters nail the weather with precision, and help chipmakers design circuits that are now impossibly complex. (Unfortunately, they will also allow hackers to break codes protecting secure traffic on the Internet.)

Today's computers solve problems the same way their ancestor, the Eniac, did back in 1946. They follow instructions step by step. Their painstaking obedience has freed humans from tedious mathematical calculations, bringing changes in communication, entertainment, and scientific research that the Eniac's inventors never dreamed of.

But their dutifulness is also their undoing. Man



Quantum computing is possible because, unlike golf balls, electrons can be in many places at once

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important problems cannot be solved efficiently by following rules. For example, to find a name in an unalphabetized phone book, an ordinary computer would have to check each listing one at a time to see if it matches. With a large enough "phone book"—say, a database of all possible combinations of human genes—this trial and error process could take centuries, even on the fastest supercomputer. That's because any ordinary computer has to represent each listing with a series of switches, each on or off, representing 1 or 0.

A quantum computer, on the other hand, could check all the listings at once, using quantum "golf balls" in place of switches. How? Let's call a ball a 1 if it's in the hole and a 0 if it's out. Because of the everywhere-at-once nature of quantum particles, we needn't make each ball either a 1 or a 0. Instead, we can assign it a

set of probabilities: say, a 50% chance that it is in the hole and a 50% chance that it's not. With enough of these 50-50 quantum balls, we can represent all the names in our phone book simultaneously.

This is the input to our quantum computer—a billion or more names, each represented with equal probability. The computer's program nudges and shapes this "cloud" of probabilities, checking all the listings against the desired name at once. The quantum programmer's job is to manipulate the odds, loading the dice in a way that leads quickly to the correct answer.

Nabil Amer, manager of IBM's quantum computing effort, predicts that this kind of subatomic gambling will have huge payoffs for complex simulations. Engineers and drug designers will be able to "just shut down the lab and do it on the computer," he

says. Picture a database containing all the known rules for how chemicals interact. A quantum computer could sift through in an instant to find a molecule to fit any wish list of drug properties.

Actually building one of these devices, however, is a major challenge. And around the world, radically different designs are emerging. At the National Institute of Standards & Technology, scientists run quantum calculations by flashing brief pulses of laser light onto beryllium atoms that have been chilled to near absolute zero. Light particles bouncing between two mirrors act as the quantum golf balls in a California Institute of Technology experiment. And at NEC Corp.'s Fundamental Research Labs in Tsukuba, Japan, a tiny superconductor attached to an ordinary silicon chip generates 1-0 mixtures.

So far, the most success-

ful design sits in Isaac Chuang's lab at IBM's Almaden Research Center in San Jose. A pencil-size glass tube filled with a yellow liquid containing millions of alanine molecules rests inside an NMR machine, a small version of the imaging machines used in hospitals. Each molecule is a tiny quantum computer with its three carbon atoms serving as its working memory. To do a calculation, Chuang uses a series of NMR pulses to flip and change the atoms' probabilities. A tenth of a second later, a final pulse forces the atoms to make up their minds and cough up an answer.

Chuang likes to joke that he has the world's largest functioning quantum computer, but he readily admits that it's still far from a useful size. With only three manipulable atoms per molecule, it can search a phone book containing only eight names. To search a bigger list, he needs a bigger molecule.

Researchers at Lucent Technologies' Bell Labs and Michigan State University have proposed a different way to solve that problem. They believe they can use any number of electrons in a layer of liquid helium in an orchestrated series of microwaves would run electrons through their calculations.

Whether we want quantum computers or not, we may find that we need them. As ordinary computer circuits continue to shrink, eventually to reach quantum mechanical size, and their behavior change radically. Many in the computer industry see this size limit—expected sometime around 2012—as a roadblock, but Chuang calls it the quantum mechanical pot of gold at the end of the rainbow. "We're starting at the beginning and walking backwards toward civilization." You can't get more quantum than this.



At IBM's research labs, Isaac Chuang uses an NMR machine to turn alanine molecules into tiny quantum computers, with each molecule's three carbon atoms serving as its working memory

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A few weeks ago, two of my children allowed me to take them to New York's Madison Square Garden for a concert by Bob Dylan and Paul Simon. Matt, 17, and Alicia, 12, had professed a mild historical interest in these icons of my generation. I quickly bought three tickets.

As we shuffled through the crowd to our seats, and later, as the music echoed around us, I tried to explain why these songs had been so important to me when I was their age. They reciprocated with talk about how they

A PERSONAL VIEW

felt about their music (while kindly downplaying the point that Dylan and Simon couldn't quite compare with, say, Metallica or Jewel). It was a wonderful evening.

It was also an old-fashioned, offline, utterly analog experience. It relied solely on mid-20th-century, pre-Internet technology. And that was part of its particular charm.

Madison Square Garden was drafty, the sound was mud-

High-tech digitized music is fine, but it will never beat the real thing

by Paul Raeburn

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the music,
that
human
connection
is broken**

by echoes and background noise, we had a partly obscured view of the stage. There are many other ways we might have enjoyed the music we heard that night. We could have listened to the pile of Dylan and Simon CDs we have at home, or downloaded MP3 audio files from the Web. Or we might have watched videos of the two stars in performance. Any of those options would have given us far richer technical reproduction of the sound than what we heard at the concert. And even more options might be around the corner. Bored too long, the kids and I might have been able to watch three-dimensional holographic images of Dylan and Simon performing in our living room. Even something about the magic of that evening would have been lost if we hadn't been right there, in the big room with Simon and Dylan and thousands of buoyant fans.

In the next century, technology will transform our lives, even more than it has in this century. It has already given us many choices, and in the next century it will give us many more. But the new choices will not displace the old choices. Often, the old choices will still be the best.

Consider the solitary figure in the photograph at the beginning of this essay, sitting alone at the end of a long wooden dock, looking out at the water. Contemplative moods seem to draw us to water, as Herman Melville noted in the opening pages of *Moby Dick*. "As everyone knows, salt water and land are wedded forever," he wrote. "Let the most abstract-minded of men be plunged in his deepest reveries. Stand that man on his legs, set his feet a-going, and he will infallibly lead you to water." Virtual reality, no matter how sophisticated, will not replace a lazy Sunday afternoon at water's edge, with the briny smell of the ocean and the murmuring of the gulls.

Or think of the young piano student who practices day after day for

years, or decades, to learn to extract feeling and expressiveness from a series of wooden levers, padded hammers, and tightly strung metal wires. Some years ago, I heard Vladimir Horowitz perform in a rare appearance at Boston's Symphony Hall. An undeniable part of the satisfaction of listening to him play was the understanding that he had devoted uncounted hours to highly disciplined study and practice in order to be able to produce the exquisite music he produced that evening. It was a remarkable human achievement.

CHOICES. Technology, on the other hand, allows performers with minimal training to produce music of professional caliber. It is already possible to capture a great pianist's touch electronically, and to recreate a performance almost indistinguishable from the original. But something is lost. When Horowitz plays, we can identify with the person behind the music; we can share with him the emotions he is expressing. When a machine performs, that human connection is broken. There are no emotions. There is nothing to share.

The same is true of great athletic performances. The next century will bring us a medicine chest full of performance-enhancing drugs. It will also bring bionic implants that will enable athletes to break today's speed and strength records. But if competition is given over entirely to performance-enhanced athletes, sporting events will lose much of their appeal. We want the visceral connection with the athlete struggling to exceed his or her limitations. Drugs and implants break that human connection.

In the next century, we face not one future, but many. Technology will alter almost everything we do. And it will give us the tools to create a bold new world. Let's hope a little of the old world survives.

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BETWEEN SILICON VALLEY AND SILICON ALLEY

How the area around Washington, D.C., became a high-tech haven

Just a few years back, the future looked bleak in Washington. Big Government was in decline as political power shifted to state capitals. To make matters worse, federal agencies were shedding thousands of employees, depressing both real estate values and the city's spirits.

While the rest of the country may still think of it as a snake pit of legislators, lawyers, and lobbyists, Washington

is quickly morphing into a high-tech hotbed. Entrepreneurial fever is sweeping the Potomac. Hundreds of new companies are being started, particularly in the communications and Internet industries. Who cares who the latest House Whip is? Executives such as America Online CEO Stephen M. Case are replacing politicians as the city's stars. The result is "Silicon Swamp," where the big fish swim and only the swift

survive. "Silicon Valley is still the nation's technology nerve center, but Washington is next on the list," says Marc Andreessen, a founder of Netscape Communications Corp. who has moved to AOL as chief technology officer.

A bit of boosterism? Sure. But not much. With 208,700 technology workers, the D.C. metro area ranks as the third-largest high-tech center in the country after Silicon Valley and Boston.

Capital Gang

1 AMERICA ONLINE, DULLES, VA.
With 19 million subscribers, the world's biggest Internet access provider has hit on a money-making formula through E-commerce.

2 PSINET, RESTON, VA.
The only independent wholesale Internet service provider left, PSINet is hoping to dominate the global ISP business through acquisitions.

3 UUNET, FAIRFAX, VA.
With parent MCI WorldCom, UUNET is the world's leading commercial ISP.

4 MCI WORLDCOM, WASHINGTON, D.C.
MCI wrested away about 20% of AT&T's long-distance business after a classic David-and-Goliath struggle in the '80s.

5 NETWORK SOLUTIONS, HERNDON, VA.
Its original exclusive government contract

gave this company a big head start in the business of registering Web addresses.

6 CYVEILLANCE, ARLINGTON, VA.
Unique software that searches the Web at top speeds for copyright and trademark violations is its edge.

7 SKYCACHE, LAUREL, MD.
This company, which transmits the Internet by satellite, is the work of a home-grown D.C.-area serial entrepreneur.





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according to the economic consulting firm Regional Financial Associates Inc. That's up from ninth-largest in 1985. Tech employees now outnumber government drones, a PriceWaterhouse-Coopers study shows. And the rate of the industry's growth is so speedy that the Commerce Dept. estimates that Virginia's technology workforce will increase nearly 10% annually, to 135,100 in 2006. "D.C. is the only place outside of the Bay Area where people are willing to take a risk," says Vinod Khosla, a partner at Silicon Valley venture firm Kleiner Perkins Caufield & Byers.

And how. Last February, startup Teligent Inc. in Vienna, Va., hosted a job fair to find skilled telecom staffers to launch a national wireless phone network. CEO Alex Mandl, former president of AT&T Corp., expected about 100 prospects, but more than 1,000 showed up. Cars gridlocked outside, and Teligent President Buddy Pickle had to run out and direct traffic. "It was a disaster," says Mandl. "But we hired a lot of experienced people."

FERTILE GROUND. To be sure, the boom in technology is buoying many parts of the country beyond the Beltway. Between the traditional poles of Silicon Valley and Boston, Denver is becoming the epicenter for telecom upstarts like Qwest Communications International Inc. and Level 3 Communications Inc. Austin, Tex., Raleigh, N.C., and New York's Silicon Alley also are thriving. But the impact on Washington is perhaps the most dramatic because it has always been a government town. "Networking in Washington used to mean cocktails in Georgetown," says Mark Zandi, chief economist at Regional Financial Associates. "It now means building the Internet infrastructure for the next century."

How did Silicon Swamp get to be such fertile ground? It all started with the federal government. MCI Communications Corp. first located in D.C. because it was so critical for the company to lobby regulators to break up AT&T's long-distance monopoly. Since then, telecom startups such as Teligent have followed in MCI's footsteps to wangle everything from favorable rules to airwave

CYVEILLANCE: HELPING TO KEEP THE WEB HONEST

The idea hit Brandy Thomas and Christopher Young while boating on a summer afternoon in 1996. Working at the Alexandria, Va., branch of Mercer Management Consulting, they helped media companies that needed to protect their copyrights and trademarks. As they cruised the Potomac River, they fig-

remarks about Cyveillance clients. For example, the Arlington, Va., outfit uncovered \$6 million of potential music-licensing violations in the second half of 1998 by fingering sites using songs without permission. Although the privately held Cyveillance won't disclose revenue or profits, its 40 clients include Ford Motor Co., Bell Atlantic Corp. and Levi Strauss & Co.

CRITICAL GAP. Venture capitalists are hot on the startup, which has won \$9 million in funding so far. They figure the company fills a critical gap since most corporations don't have the time or the software to monitor the Web. While they're otherwise occupied, sleazeballs can malign them by spoofing trademarked names on porn sites or slapping a brand-name logo onto a site that sells no-name brands. Says CEO Thomas: "You need to understand a lightning speed how the other 800 million sites are affecting you."

At the heart of Cyveillance's business is software developed by Brandy Thomas' 24-year-old brother Jason. Cyveillance products search up to 5 million Web pages a day for logos, keywords, graphics, music, and video that are on sites where they don't belong.

Clients say the service is well worth the cost. Cyveillance charges between \$30,000 and hundreds of thousands of dollars annually for software and the Cyveillance personnel to run it. Before contracting for the service, Dell Computer Corp. was losing millions a year in potential sales to companies that used Dell's name or logo to attract customers. In another instance, Cyveillance found that some Web sites were swiping stories from the online version of the *Washington Post*. The benefit "has more than covered our costs," says Caroline Little, general counsel at the *Washington Post's* Internet operation.

In a year, Brandy Thomas hopes 40 of the biggest 100 U.S. corporations will be clients, up from 15 now. For Thomas & Co., it looks like charging crime pays.

By Susan B. Garland in Washington



BRANDY THOMAS

Cyveillance

LOCATION Arlington, Va.

FOUNDED 1997 by Brandy Thomas, his brother, and two friends.

THE BUSINESS Scours the Net to protect corporate clients. For Ford Motor Co., for example, it found Web sites selling Ford car parts without authorization.

THE BACKERS Raised \$9 million from venture firms New Enterprise Associates, Lazard Technology Partners, and Capital Investors Group.

ured the Internet stood to make a tough problem even tougher. To chase crooks trying to hide in the relative anonymity of the World Wide Web, big companies would need help. And the two friends decided that they were just the ones to provide it.

Six months later, Thomas and Young founded Cyveillance Inc., a sort of cyber-policeman. The company scours the Net for Web sites that sell product knockoffs, offer stolen content, or make defamatory

licenses. Similarly, many satellite companies have settled into the region because getting government authorization is such a large part of their businesses. "Satellite companies are here for the same reason that gold mining companies are in South Africa," says Noah A. Samara, CEO of D.C.-based satellite radio company WorldSpace Corp.

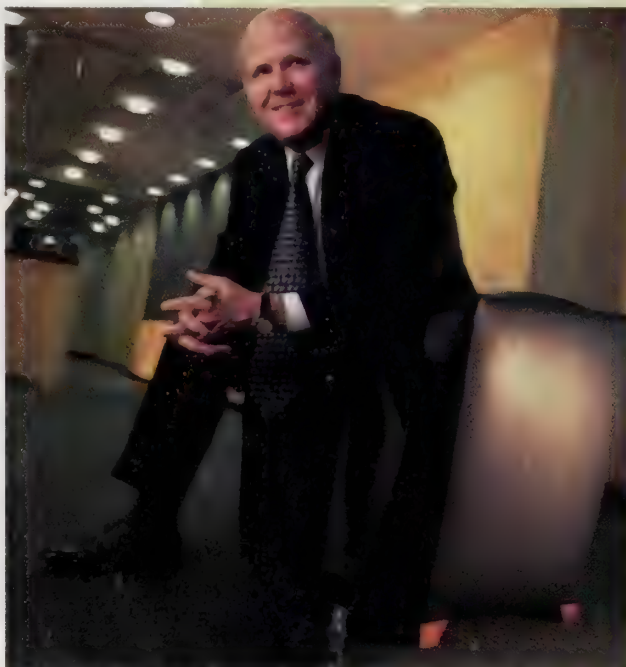
Even more important, the Pentagon's creation of Arpanet, the precursor to the Internet, has hatched a slew of local startups that have become Net heavyweights. Rick Adams, a former federal worker who invented one of the first methods of linking computers to Arpanet, founded UUNET Technologies Inc. in his Fairfax (Va.) home in 1987. Since then, UUNET, now part of MCI WorldCom Inc., has grown into the world's biggest commercial Internet service provider. PSINet Inc. founder and CEO William L. Schrader moved from New York to Reston, Va., to attract engineers with Internet experience. And from its original Commerce Dept. contract for registering Internet addresses, Network Solutions Inc. of Herndon, Va., has matured into a \$100 million E-commerce power. There was a little luck involved too: Online Goliath AOL ended up in Dulles, Va., because D.C. was founder James V. Kimsey's hometown.

SERVICE STAR. With so much government influence, the nature of the tech industry in Silicon Swamp is different from anywhere else. The Valley, built on the foundation of the chip and computer industries pioneered at Fairchild Semiconductor Corp. and Hewlett-Packard Co., has the broadest technology community anywhere. Boston's Route 128 specializes in software and computer services businesses fueled by brainpower from local universities, such as the Massachusetts Institute of Technology. In contrast, the D.C. area's tech scene is built on the telecom and Net businesses. Indeed, while Silicon Valley ranks first among U.S. high-tech regions based on revenues and number of companies, the D.C. area tops the list for high-tech services, such as telecom and Internet access, according to a recent report from the Milken Institute think tank.

What has made the Washington tech

WHY MCI'S BRAT PACK IS ALL OVER THE BELTWAY

When K. Paul Singh left MCI Communications Corp. in 1994 to launch Primus Telecommunications Group Inc., he brought the feisty long-distance carrier's iconoclastic culture to his McLean (Va.) startup. Singh, MCI's former vice-president of global product marketing, decreed any Primus employee



"Without MCI, there would be no Nextel or Teligent"

DANIEL AKERSON

Chairman of Nextel Communications

could E-mail suggestions to top managers and get a response within 24 hours. Primus executives quickly cottoned to the idea, as well they might: Five of Primus' six top officers are MCI alums.

Primus is hardly the only example of the MCI old-boy network at work: the Washington area is rife with tech highflyers piloted by executives who cut their teeth there. Indeed, MCI has been the very wellspring of the area, a pool of talent and ideas that has been as crucial to Washington's tech

scene as Hewlett-Packard Co. was Silicon Valley's birth. "Just as there are six degrees of separation between any two people on the globe almost all of the telecom firms here can trace their roots back to MCI," says James B. Murray Jr., managing director of Columbia Capital Corp., an Alexandria (Va.) venture firm. Daniel F. Akerson, a former MCI president who is chairman of Nextel Communications Inc., puts it more bluntly. "Without MCI, there would be no Nextel or Teligent."

RISK-TAKERS. And Akerson names only two of MCI's spiritual heirs. A Pathnet Inc., a Washington carrier Chief Financial Officer James M. Craig, Communications Services President Kevin J. Bennis, and Network Services President Robert A. Rouse are MCI grads. Another is Brian Thompson, chairman of GlobTel Systems Group, which provides phone, data, and Internet service in Europe. Todd Ruelle is president of data carrier Sonic Telecom Ltd. in Chantilly, Va.

There's not much mystery to how MCI became the center of D.C.'s startup scene: Founder William G. McGowan built an organization of risk-takers. He promoted star performers about every 18 months to learn different sides of the business. And McGowan created a divisional structure in the '80s that let senior managers run their own shows.

As competition heated up, MCI became a prime hunting ground for telecom startups in search of talent. "We know how to take market share from market leaders," says Primus' Singh. The exodus accelerated after McGowan's heart attack in 1986 and his 1992 death.

However, some ex-MCIers think the upstart-turned-behemoth's days as a spawning ground for entrepreneurial talent are about over. The region's next generation of high-tech executives is likely to come from America Online Inc., many say. "They have a missionary zeal about them that MCI did," says Akerson. He sounds almost wistful.

*By Amy Borrus
in Washington*

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scene so vibrant, though, is that the second-generation startups are moving well beyond the region's traditional government roots. Former MCI execs are launching new companies, including long-distance player Primus Telecommunications Group Inc. and Pathnet Inc., a wholesale telecom carrier. AOLers are strapping out on their own: Robert J. Smith, founder of AOL's Digital Cities service, is now CEO of D.C.-based E2ENet Inc., which plans to build portals for various industries. Even startups such as Corvis Corp. in Linthicum, Md., a maker of optical networking equipment, are producing entrepreneurs. Ciena founder David R. Huber has started Corvis Corp., a Columbia (Md.) company that will produce optical routers.

What's more, executives of the region's successful companies are plowing their profits back into new startups. Mario Morino, the retired vice-chairman of software maker Legent Corp., was acquired by Computer Associates

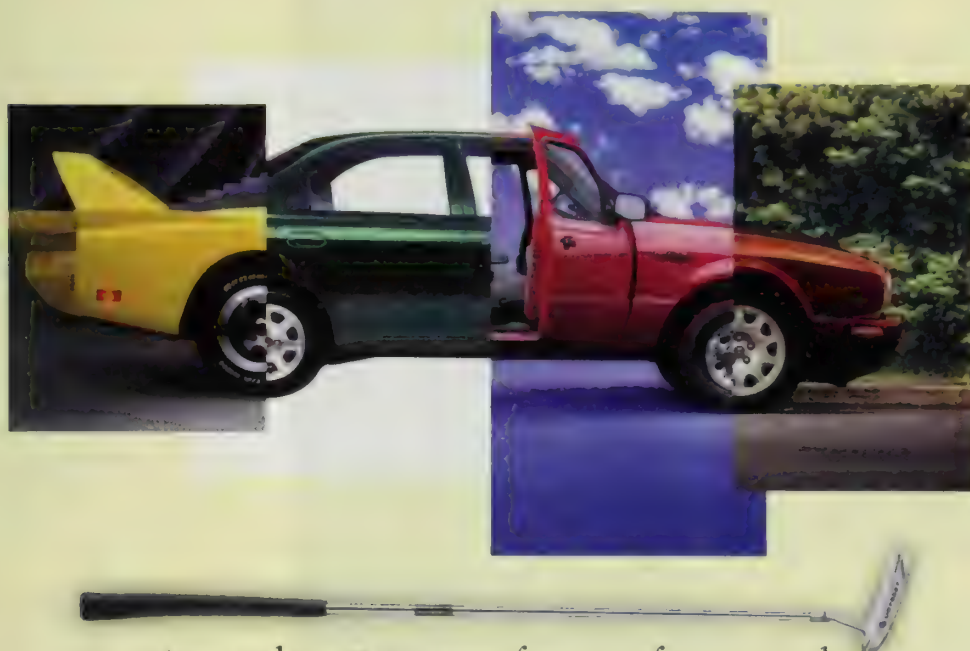
The combination of money and skilled labor is a magnet for even more resources

International in 1995, helped found Capital Investors Group last year. A \$5 million venture fund whose supporters include AOL's Case and MCI WorldCom Vice-Chairman John W. Sidgwick. One of the first beneficiaries: Arlington-based Cyveillance, which scours the Web for nefarious activities that may hurt its clients (page 170).

LOYALTY. As in the Bay Area, the combination of money and skilled workers acts like a magnet to attract even more resources to the area. The Silicon Valley venture firm Draper Fisher Jurvetson just opened a Reston (Va.) office. Kier Perkins scouts out deals in the area regularly and invested \$10 million in Corvis. Top Valley law firm Cooley Goddard LLP also has set up shop in Reston, while premier tech law firm Sonnenschein, Goodrich & Rosenthal headquartered in Palo Alto, Calif., is looking for office space.

Australian Phillip H.J. Merrick says he could have started his business software company, webMethods Inc., anywhere in the world and chose Fairfax, Va. The reason: He thinks the Washington area has better sources for entrepreneurs than anywhere else, including Silicon Valley, where he thinks workers are too disloyal.

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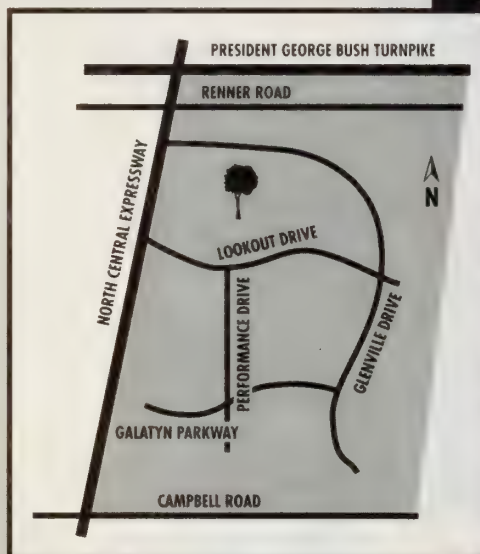
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ple from Washington don't go job-hopping every 18 months," he says.

All the action in the Swamp is attracting deep-pocketed acquirers looking for cutting-edge technology. In Texas Instruments Inc. announced it would acquire Telogy Networks of Germantown (Md.) maker of Internet voice software, for \$435 million. In Sweden's Ericsson spent \$450 million for Torrent Networking Technologies Corp in Silver Spring, Md., which makes high-speed routers. And last year, Cent Technologies Inc. paid \$1 billion for Yurie Systems Inc. in Dover, Md. Yurie makes equipment that compresses voice, video, and data and transmits them speedily over networks.

Yet Silicon Swamp comes up with a few counts. Despite the influx of new money, venture-capital funding lags. According to PriceWaterhouse Coopers' MoneyTree Survey, the area snagged only 5.6% of the \$1 billion in venture funding invested

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U.S. last year. That puts it third in Silicon Valley, with 32% of the investments, and New England, with 21%. But as financiers discover the area's potential, that gap could narrow. "It's the best-kept secret in the country," says Frank A. Adams, CEO of General Capital Group, a Timonium (Md.) venture-capital firm.

And the intellectual ferment in the Swamp is nowhere close to Silicon Valley's bubbling cauldron, in part because the area lacks a world-class technology research university. "There's never going to be another Valley," cautions Morino. But the region's self-appointed savior is trying. Morino founded the Atlantic Tomac Knowledgeway and the Morino Institute to introduce budding entrepreneurs to established execs.

Here's the upshot of Silicon Swamp: Enterprising techies are pumping new life into Washington's once-dreaded bureaucracy-obsessed culture. The region now has a pulse and some sizzle to plant government-issue gray. And change, some folks in Washington's swamplands are actually creating wealth—instead of siphoning it off hapless taxpayers.

By Catherine Yang, with Amy E. and Susan B. Garland, in Washington

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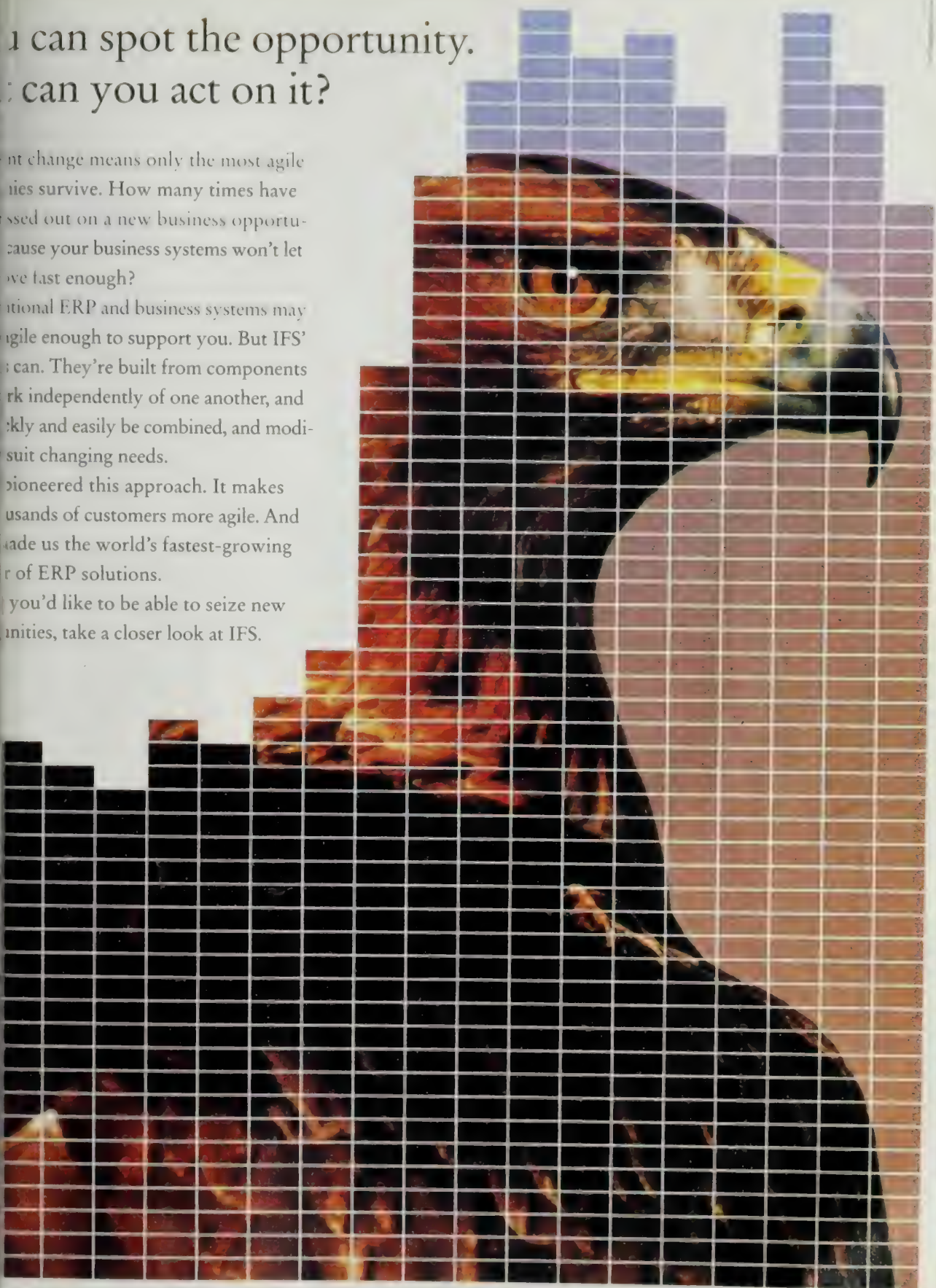
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MOTOROLA EMBEDDED SOLUTIONS

COMMENTARY

By John A. Byrne

MEMO TO THE EX-CEO: JUST LET GO

A mere 20 months ago, Humana Inc. CEO David A. Jones hailed his youthful successor as "a visionary and inspirational leader." Gregory H. Wolf, the health-care company's chief operating officer, had done so well refocusing the business that the retiring Jones dubbed him "the right person in charge." How quickly things change. On Aug. 3, Wolf abruptly quit, and Jones, the legendary co-founder who had remained chairman, stepped in as interim boss.

Wolf's short stint and Jones's return raise a compelling governance issue: Should a retiring CEO sit on the company's board? Or should he give up his board seat along with his CEO title?

Whether Humana's Jones, 67, actively undermined his successor is not known. Jones, Wolf, and Humana's directors could not be reached for comment. Wolf, 42, was under heavy pressure as Humana's stock slumped along with rivals' in the struggling health-care industry. But when a strong-minded former CEO hangs around the boardroom looking over his successor's shoulder, it can only complicate an already tough job. "You can create a situation where the new CEO is constantly being undermined," warns Patrick McGurn of Institutional Shareholder Services, a proxy advisory firm.

A CLUE. Indeed, business history is rife with tales of leaders who get in the way of potential successors so as to remain at the top. CBS Corp. patriarch William S. Paley, who axed several candidates for his job, engineered a return as chief at 85. AT&T CEO C. Michael Armstrong turned down the job at first because then-CEO Robert E. Allen wanted to remain board chairman. Allen should have taken a clue from Walter Wriston, who quit the Citicorp board when successor John S. Reed took over. "If the new CEO wants to tap the perceived wisdom and experience of the retired CEO, a telephone call or a quiet meeting does not require a board seat," says Wriston.

Wriston is hardly alone in that

view. Jack Welch, the chairman and CEO of General Electric Co., says he greatly benefited from the departure of predecessor Reginald H. Jones when Welch took over in 1981. With Jones gone, he could more aggressively rethink the company's direction. Now Welch will leave GE's board when he retires in late 2000. "Succession is part of the rebirth of an organization," he says. "It will be a free swing for a new team."

Many directors argue that it would be foolish to toss away the experience of a retiring CEO, and there are certainly situations where keeping the ex-chieftain on board can help. Intel

Corp.'s Andrew S. Grove and Home Depot Inc.'s Bernard Marcus have developed such battle-tested relationships with their successor CEOs that leaving the board would probably waste a key intellectual asset. Unlike many outgoing CEOs, both fostered thriving partnerships full of give-and-take with their successors. The up-and-coming executives have been free to disagree on important issues, ensuring that they had the needed authority when they stepped up.

Such relationships, however, are more the exception than the rule. They are intrinsically linked with the ability of the new CEO—and the other directors—to stand up to the outgoing chief when disputes occur. That's why smart directors consider whether to keep the ex-CEO out of the boardroom should carefully weigh these questions:

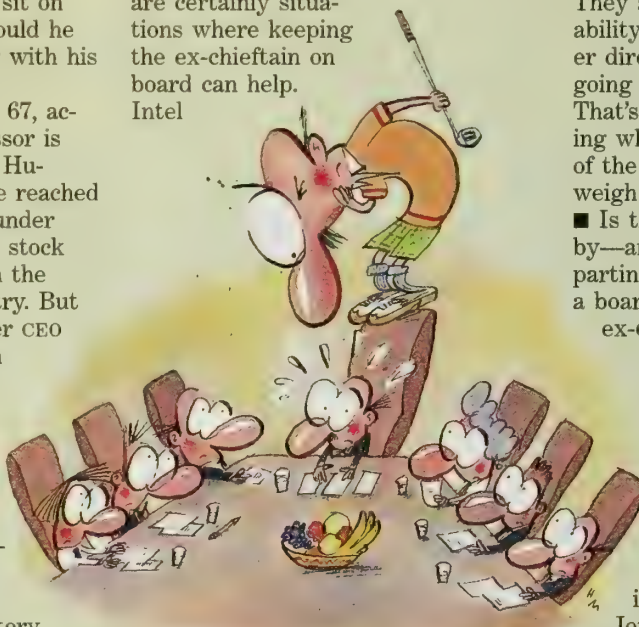
■ Is the board largely recruited by—and closely linked to—the departing CEO? It's inevitable that such a board will continually defer to the ex-CEO. During Wolf's tenure as CEO, he was unable to add a single recruit to Humana's eight-person board, which includes Jones's son.

■ How well has the former CEO planned for his succession? A leader who has failed in grooming successful candidates may have trouble leaving power behind. Humana's Jones ousted his president and chief financial officer only three years ago after disappointing earnings.

■ Is the company in crisis? If so, the new boss deserves a free hand. It's awfully hard to make changes when they are seen as implicit criticism of the old regime.

Following these guidelines won't guarantee success—just the new CEO's freedom to call the shots. The Humana board should now make Jones's interim reign as brief as possible. And when it finds an able successor, it should give that person the "free swing" Welch intends to give GE's new CEO.

Senior Writer Byrne covers board issues.



KEEPING AN EYE ON THE BOSS

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CAN BOEING GET LEAN ENOUGH?

It's aggressively trimming costs, but turbulence lies ahead



FAST PLANES: A new automation system should cut construction time by 10%

As mating dances go, few are more complex than the joining of airplane wings and bodies on Boeing Co.'s assembly lines. Until recently, workers had to struggle five days on each 737 jet, using 30-year-old equipment to manually calibrate and recalibrate the parts until they lined up just right. But now, thanks to a new laser-alignment device, the whole thing takes just two days.

Such small victories are key if Boeing is going to prove that it has beaten the production nightmares of the last two years—and that it's ready for the next big challenge. The aerospace giant has boldly promised Wall Street it will keep earnings steady next year, and double operating margins, from 3.6% this year, to 7% in 2003. Problem is, the vow comes as the slowdown in Asian orders forces Boeing to cut plane production by 23% next year—shaving revenues by some \$10 billion. To keep profits aloft, it will have to crank out planes faster and cheaper than it has in years.

How? For starters, Boeing has jettisoned unprofitable airplanes that it inherited from McDonnell Douglas Corp. after their 1997 merger. To slash its in-

ventory costs, Boeing also will sharply cut its base of suppliers. Most important, now that a new \$1 billion automation system is finally kicking in, Boeing says it will cut the time it takes to build each aircraft by 10%. Says Chief Executive Philip M. Condit: "Pure and simple, the biggest part of [increasing profits] will be [cutting] the number of hours it takes to build each airplane."

So far, the efficiency push is paying off. Boeing dazzled Wall Street on July 15, turning in second-quarter numbers far better than analysts expected. Profits rose 172% over the same quarter

last year, to \$701 million, mostly improvements in commercial air. Boeing's stock price of 46 is far from its mid-'97 high of 60, but up 38% last April. "Whether it's the fear of the bear market or the fear of Wall Street, they've got to get the message," says Jon Kutler, president of Quarterdeck Investment Partners Inc., an investment advisory firm.

But some investors and analysts are in a main wary, and it's easy to see why. Last year, Boeing launched a major share war with Airbus Industrie as it was trying to junk old equipment and modernize production. Boeing's cost-cutting stories became snarled as new projects were stacked up. The resulting \$900 million write-off led to a \$186 million net loss in 1997. While it earned \$1.1 billion on its commercial side in 1998, most of that came from military work. Boeing's commercial side lost \$246 million. Management's overly optimistic promises about cost savings compounded its credibility problems.

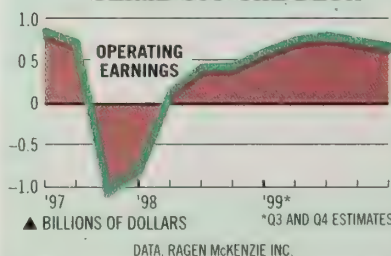
NO SMALL SAVINGS. To right things, Boeing executives are putting every plane under a microscope. Analysts say that to double operating margins, Boeing must cut about 7% from the cost of each plane it makes next year. That adds up to \$4 million per plane. Boeing says they can get big savings from operational improvements. Designing digitally, rather than on paper, and custom reshaping that must be done at the assembly line. No savings are small. In McDonnell Douglas' once-legendary C-17 military cargo plane program, workers found that pre-applying sealant on the 1.4 million pins and rivets used in each plane would speed insertion and assembly costs by nearly 1%. Now, commercial planes get the same treatment.

The production slowdown will save money. Boeing will cut 13,000 suppliers over the next two years, mostly smaller companies that duplicate equipment. As McDonnell Douglas planes are phased out and new ones slow, Boeing will shut down 27 million square feet of production line by 2003.

Boeing is going to need all the financial wiggle room it can get. Condit talks with the International Association of Machinists could lead to a strike that would fall unless Boeing can find a way to give workers a sense of job security. The competition with Airbus grows fiercer, as seen in long-time Boeing customer China Airlines' decision to skip the big jet order, giving \$3.8 billion to Boeing and \$1.8 billion to Airbus. But Boeing can learn its efficiency lessons fast enough, it may yet convince Wall Street this turnaround is for real.

By Janet Rae-Dupree in Seattle

BOEING'S PROFITS CLIMB OFF THE DECK



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THE MARKET HAS TWO FACES

Bulls see rosy corporate earnings, the bears rising interest rates. Who's right?

summertime, and the living is easy...that is, if you're currently a bear. The Dow Jones Industrial average has dropped since its July peak. The Nasdaq Composite Index and the Standard & Poor's 500-stock index have done far less well, down 10.4% and 8.2% respectively from their year highs. All told, more than \$1.14 trillion in U.S. stock market wealth has disappeared on the decline since July 16.

Bears are depending on rising interest rates to keep the correction alive. They say the Federal Reserve will raise rates to slow the economy on Aug. 24 and again in October, putting a damper on stock prices that will last at least through the end of the year. Bulls argue that the market may be soon getting yet another boost from rosy corporate earnings. Even in the face of rising interest rates, say bulls, corporate earnings are continuing to soar, the U.S. economy is booming, and the market will reflect this once the current downturn is over.

TO VALUE. Will the bears win the victory or the bulls? Perhaps not. The force of rising rates may have a moderating effect. It may well be that by the end of the year, the major indexes don't pick up much momentum on the upside or downside. The market may become locked in a narrow "trading range," as it's known on Wall Street. But stocks overlooked by investors—value stocks and small-cap stocks, though they've been underperformed in the last month—may return their larger growth counterparts' despite higher rates. Small-company earnings look especially strong going forward and they are selling at noticeably lower price-earnings ratios. At least there's no arguing this: The market is richly valued, with the Dow trading at nearly 26 times forward earnings. Indeed, even the most ardent of bulls, Goldman, Sachs & Co.



Chief Investment Strategist Abby Joseph Cohen, is saying the market is now only "minimally undervalued." Cohen, whose model is based on the S&P 500 vs. intermediate-term bond prices, remains unfazed by rising interest rates. "They've already been factored into stock prices," she says. Cohen says that rosy corporate profits for the rest

of the year are far more important than rising rates when it comes to current market valuations. "We've seen most of the damage from interest rates, but we've not yet seen the full benefits from rising corporate profits," says Cohen, who predicts 7% to 8% growth in S&P 500 operating earnings by yearend.

Cohen's contention that rising rates

The force of rising rates meeting rising profits may have a neutralizing effect on the stock market

are already built into stock prices may be right. According to a recent Salomon Smith Barney study, the threat of higher rates is swiftly priced into the market. Moreover, of the 34 times in the past decade that bond yields rose 10% or more, stocks were higher within six months 32 times and near break-even the other two.

Another bull, Thomas McManus, portfolio strategist at Banc of America Securities, says that rising rates coupled with rising profits can be good for equities. "If interest rates are rising because of an increase in future profits, then stocks fare well," he says. McManus says it's a buying opportunity for some of the large-cap growth stocks that have had the wind knocked out of them. A favorite is America Online,

interest rates rise and large growth issues are hit the hardest," he says.

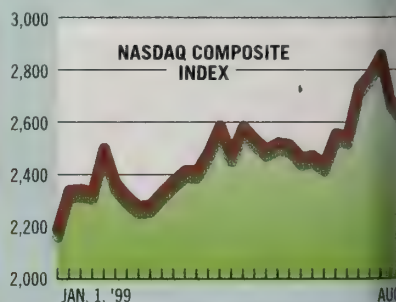
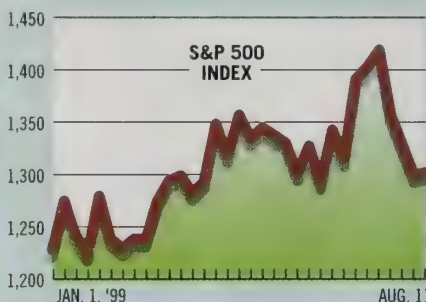
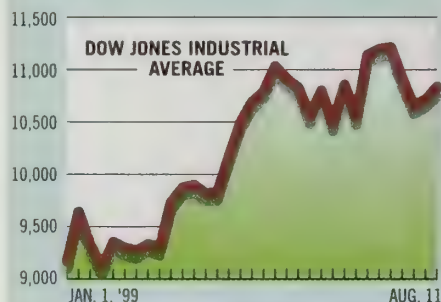
There's no question that corporate profits will continue to be strong. According to First Call Corp., an earnings research firm, the second quarter should shape up well—with 92% of companies reporting earnings so far, profits are up 14.5% from last year. The third and fourth quarters look even better, says Charles L. Hill, First Call's director of research, who estimates a 21% increase in the third quarter and around 18% for the fourth. "Business in the U.S. is very strong, but we have some easy comparisons from last year," says Hill.

Joseph Abbott, chief equity strategist at I/B/E/S International, is clearly in bear territory. He maintains that profits

like those of virtually all bonds, in the opposite direction of interest rates, suffered their second-worst on record. And while interest rates were rising, corporate profits were on the rise. The S&P 500-stock ended down 1.5% for the year, and Dow Jones industrial average only 2%.

FOLLOW THE LEADER. Merrill's Bernstein reasons that large-cap growth doesn't have the incremental growth necessary to offset the effects of rising rates. "That's why we'll see a leadership shift," he says. In fact, rates are largely why small-cap and value stocks did well in the second quarter of this year, with the average small-value mutual fund returning 18.66% for the S&P 500. "The most

COMING DOWN TO EARTH?



DATA: BLOOMBERG FINANCIAL MARKETS

which is 47% off its 52-week high. But McManus has a caveat: "In this environment, a company's fundamentals better be intact." He believes the Internet bubble has burst and he's staying away from dot.com stocks with scant earnings.

DOOMSDAY SCENARIO. But Richard Bernstein, chief quantitative strategist at Merrill Lynch & Co., is more bearish. He says that rising interest rates are a major threat to stocks, especially the so-called "Nifty Fifty," the largest 50 stocks in the S&P 500. "The bigger the optimist you are regarding the rejuvenation of the global economy, the more you have to think rates will go up," he says.

Bernstein, whose quantitative models indicate the market is around 20% overvalued, thinks the glowing profits scenario also spells doomsday for large-cap growth stocks. "When profit cycles and economic cycles are accelerating,

look good largely because of easy year-over-year comparisons. In addition, "stock valuations make me queasy," he says. The I/B/E/S model, which compares stock earnings for the next 12 months of the S&P 500 to the 10-year bond yield, shows that the market is overvalued by 40%. Abbott says the previous valuation high was 39.8% in August, 1987, just two months before the market crash. "These lofty heights are mostly due to over-enthusiasm on the part of equity investors who are paying much more than they used to for large growth companies," says Abbott.

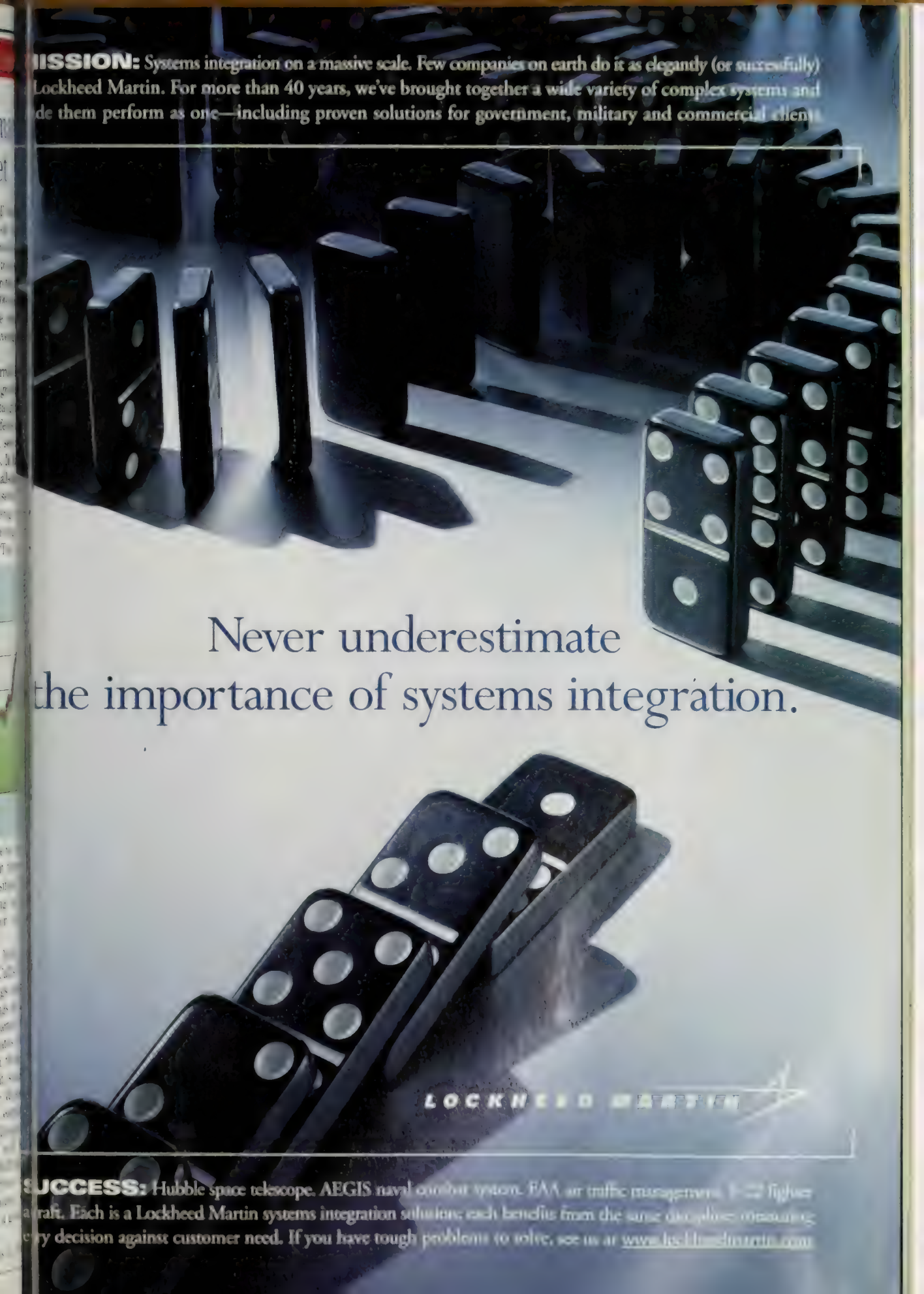
Abbott also points out that in a rising interest-rate environment, sunny corporate profits often don't give stocks the expected oomph. "It's a bit like running in place. There's a lot of action, but you're not going anywhere," says Abbott. History, in fact, offers some support for his thinking. In 1994, long-term government bonds, whose prices,

controversial statement we've made recently is that looking out three to five years, returns in diversified value small-cap funds are going to be better than Internet or technology stocks," says Bernstein.

And small-cap profits look good going forward, too. First Call's Hill says that Russell 2000 earnings could be par with large-cap earnings in the quarter. In the fourth quarter, however, he says earnings estimates for stocks look better than those of the S&P 500 stocks. Not only that, small caps remain cheap, with the Russell trading around 18 times earnings.

Sure, investors in small-caps and value stocks haven't done well over the last few years. But by shifting into areas that can benefit from a rising rates/rising profits scenario, such as value stocks, may yet turn out to be a good strategy for optimistic investors.

By Marcia Vickers in New York



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COMMENTARY

By Larry Light

GOODWILL ACCOUNTING: GO REFIGURE

'Goodwill," says Webster's, is "a kindling feeling of approval and support." That's the first definition. The second couldn't be more different. It is the bane of corporate finance, wiping out many billions of dollars of earnings every year. And it may get worse. Starting in 2001, the goodwill tab could well double. To be sure, Corporate America has a long history of exploiting accounting rules. But the way goodwill is figured these days makes little sense and should be changed.

First, an explanation of goodwill math. Say Company A pays \$1 billion for Company B, which has hard assets—plant, equipment, etc.—valued at \$600 million. In the metaphysics of accounting, the \$400 million difference—i.e., the goodwill—represents all the intangible stuff, such as brand names and customer loyalty.

SLICING THE PIE. Before 1970, goodwill was carried on the books forever as an asset. But then—because that era's buyout tabs were, like today's, so high—the makers of accounting rules required that goodwill be written off against net earnings for up to 40 years, as if it depreciated like a diesel-fired generator. So \$10 million of that \$400 million goodwill gets sliced out of profits each year. While this is a noncash charge that doesn't affect cash flow, it does zap earnings per share. "Investors," says Lehman Brothers Inc. accounting expert



Robert Willens, "focus on EPS."

The rulemaking Financial Accounting Standards Board is seriously considering cutting in half the write-off period for new deals, down to 20 years—thus doubling the charges. Plus, the FASB has voted to end, by 2001, the merger-meisters' favorite dodge around the goodwill strictures: "pooling of interest." That's where the two partners combine their books and pretend they were never apart. Hence, no goodwill charges.

Ending pooling is a good idea, as the practice distorts disclosure to investors. Yet the overall economic impact of FASB's handiwork won't be as

benign. Why? Because tightening goodwill rules threatens to discourage mergers that may benefit and streamline the economy. Philip D. Ameen, comptroller of General Electric Co., which last year purchased 108 companies for \$21 billion, wrote the FASB to decry the 20-year write-off period as "intolerable" because it would make GE's shopping list more costly.

There's a better way to deal with goodwill, one that would lessen the pain of the charges and better conform to reality. The truth is that much goodwill—a company's well-known name, for instance—doesn't necessarily wear out, as does that diesel generator. So, provided that the company and its brands don't go sour, this kind of goodwill should be exempt from write-offs.

How to measure what the non-amortizable goodwill is worth? Two professors from Southern Methodist University's Edwin L. Cox School of Business, Wayne Shaw and Steven Henning, claim to have licked that problem by using stock performance to tell what should be exempt, a system similar to Britain's. "The market is the best value gauge," says Shaw.

To figure out the goodwill that won't wear out, Shaw and Henning take the target company's market value right before the buyout announcement and subtract what the hard assets are worth. Take AT&T's pending \$60.5 billion purchase of cable operator MediaOne Group (table

This buyout will generate \$40 billion in goodwill. But under the SMU professors' system, \$25.5 billion of it won't depreciate. Only the remaining \$14.5 billion must be taken as a charge.

The FASB staff concedes that the SMU plan or one like it might work, but they want to study it first. FASB, though, often takes five years to make the smallest changes. For the sake of merger-prone companies, it should move a lot faster.

Associate Editor Light covers corporate strategies.

BETTER GOODWILL

Goodwill charges are onerous. A new plan, shown by the AT&T/MediaOne deal, lessens the burden.

WITH CURRENT GOODWILL CHARGES		BY EXEMPTING SOME GOODWILL FROM CHARGES	
	BILLIONS		BILLIONS
AT&T'S BUYOUT COST	\$60.5	AT&T'S BUYOUT COST	\$60.5
FAIR VALUE OF MEDIAONE'S ASSETS*	-20.5	FAIR VALUE OF MEDIAONE'S ASSETS*	-20.5
GOODWILL CREATED	40.0	GOODWILL CREATED	40.0
ANNUAL HIT TO AT&T'S EARNINGS FROM AMORTIZING GOODWILL	1.0	NON-AMORTIZABLE GOODWILL	-25.5
		AMORTIZABLE GOODWILL	14.5
		ANNUAL HIT TO AT&T'S EARNINGS	0.4

*Estimated

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Finance

BANKING

IT'S NOT THE LAST ACT FOR FIRST UNION

CEO Crutchfield has a chance to get the bank back on track



By now, the sharks should be circling First Union Corp. The nation's sixth-biggest bank is wounded, having overpaid for acquisitions and underperformed in the eyes of Wall Street. First Union's profits fell 1% last quarter while those of its competitors soared. And despite a recent management shakeup and pep rally for investment analysts this month, shares in the Charlotte (N.C.) company remain in the doldrums, down about 25% since May.

But First Union Chairman and Chief Executive Officer Edward E. Crutchfield may have time to turn the bank around. First Union would make an attractive takeover target. But investment bankers say the logical buyers—Wells Fargo & Co. and Bank One Corp. top most lists—are busy, either integrating previous acquisitions or expanding on the Internet. “Lightning could strike tomorrow, but based on everything we see, it’s more likely some-

VAST HORIZONS: Did he overexpand or build a buffer against takeover?

thing will be done next year than this,” says Bert Ely, president of Ely & Co., a financial consultant in Alexandria, Va. “There are people who feel that First Union got a break. They got a six-month to one-year window of opportunity to get their act together.”

A lot of repair work needs to be done. Starting in the 1980s, Crutchfield bought scores of banks, expanding his business up and down the Atlantic Seaboard. But recently, analysts say, Crutchfield got carried away, most notably with his \$17 billion purchase of Philadelphia’s CoreStates Financial Corp. last year.

To justify the price, First Union needed to slash costs. And it had a strategy—the Future Bank Initiative. The idea was to divert customers to phone kiosks and free up branch staff

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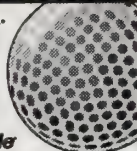
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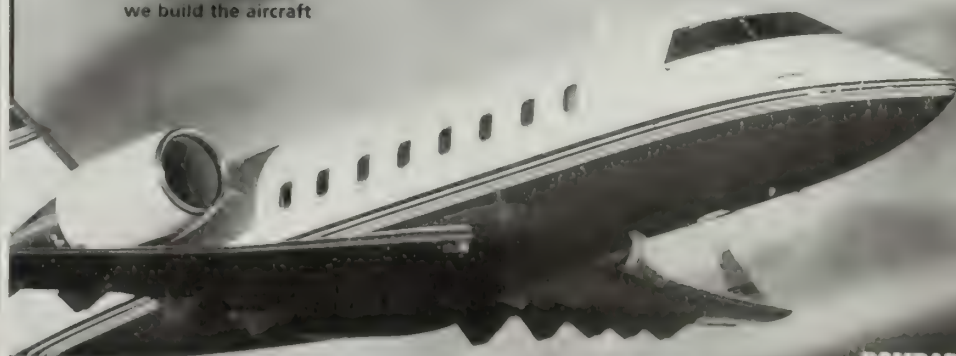
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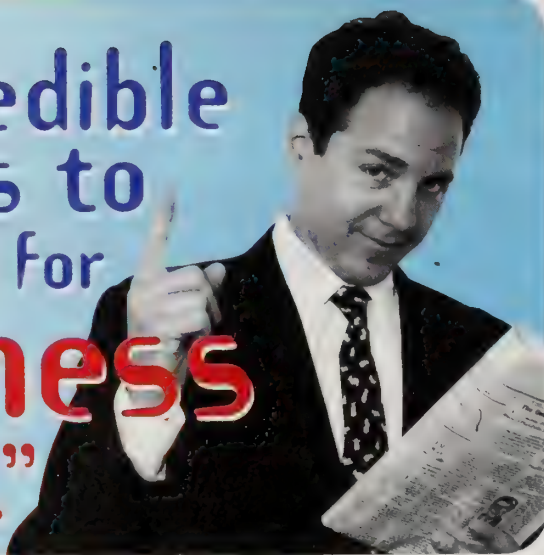
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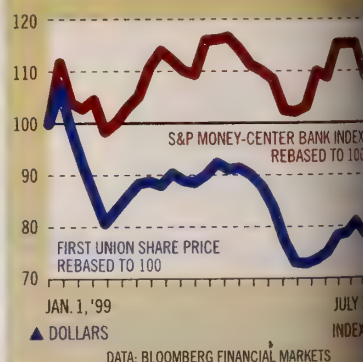


THE
PRINCETON
REVIEW

Finance

for more specialized selling. But strategy backfired, annoying customers particularly at CoreStates. First Union responded by hiring 2,000 tellers a year to provide more hands-on service. Still, the damage was done, and First Union twice warned analysts that it would fail to meet profit forecasts. **REBELLION?** Reeling from the bad news, investors sensed a change on July 3 when word of a First Union board meeting sent shares in the company higher. But investor hopes for a boardroom rebellion were dashed. The company said Crutchfield's longtime second-in-command, John R. George, would be retiring. Many suspected

BEHIND THE PACK



was falling on his sword for Crutchfield, who seems to get his way on the board.

First Union had another chance to win over investors on Aug. 4, when it held a three-hour briefing for analysts in New York. The company argued that its Future Bank was getting on track with announced plans for an enhanced service site, and pointed to its growing securities business. But the reaction was tepid. For some, the lasting memory was of the bank's future being outlined by Georgius—symbol of the past.

Still, First Union is hardly a basket case. Although its profits fell last quarter, it made \$873 million. It is also worth a market value of \$45 billion. "I know bigness guarantees survival," says Charles W. Peabody, analyst at Morgan Stanley Securities. "It is tougher for anyone to swallow." Of potential buyers, Wells Fargo Bank One are busy with old mergers. Chase Manhattan Corp. and Citicorp are focusing on the Net, while Bank of America is unlikely on antitrust grounds. There aren't so many foreign suitors—apart from, say, ABN-Amro and HSBC Holdings PLC. In other words, Crutchfield is down but not out.

By Gary Silverman in New York

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FREE CD-ROM OFFER — For more information and your free CD-ROM on Building a Better Presentation, call 1-800-472-7669, ext. XC50. www.sony.com/displaysystems



VPL-X1000U / VPL-S900U



VPL-X2000U

Ultra Personal
VPL-XC50U / VPL-SC50U
8.2 pounds
600 / 500 ANSI lumens
XGA / SVGA resolution

Innovation at

SONY

Media on the Move

By Robert L. Lindstrom

ment where waiting for connection and comprehension can mean the loss of major opportunities or even the end of an enterprise, the moment when all parties see eye to eye must happen sooner rather than later. Pulling it off requires two important capabilities: speed and reach. With the advent of digital visual communication, we now have the tools to transport and distribute visuals farther, faster and to more brains than ever before possible. And it all happens in the blink of an eye—literally.

This special advertising section, created and produced by Knowledge Industry Publications, is the third in a four-part series that examines the growing importance and impact of visual-communication techniques and technology in 21st century business. The first three installments of Being Visual are downloadable from our Web site at www.kipinet.com/beingvisual.

Being Visual

Part Three

Face to Face, Place to Place

In business, the benefits of technologically extended human conversation are obvious. Increasingly, we find there is less time to bring people together for face-to-face communication. The communication must happen at a distance, across the office or across time zones. Sometimes it happens one-to-one, other times it involves hundreds, thousands or even millions of people. Sometimes the conversation has all parties present at the same time; in other instances the conversation is time-shifted to fit human schedules.

We want to send as much information as possible, as fast as possible, as far as necessary, to as many people as needed. And, we want that information to be as rich and dynamic as an in-person encounter. In every case, success is measured by the degrees of connection, comprehension and persuasion.

The digitization of visual information offers more than just the capability to make more images (the subject of Being Visual Part II). It brings with it the capability to move images farther and faster. Binary digits, or bits, are highly portable. You can pack millions or even billions of them onto a shiny CD-ROM, a DVD or other portable media such as removable cartridges,

and transport that information anywhere in the world. In addition, you can connect computers to one another with wires or wirelessly and transmit digits around the globe at speeds that would disintegrate a bullet.

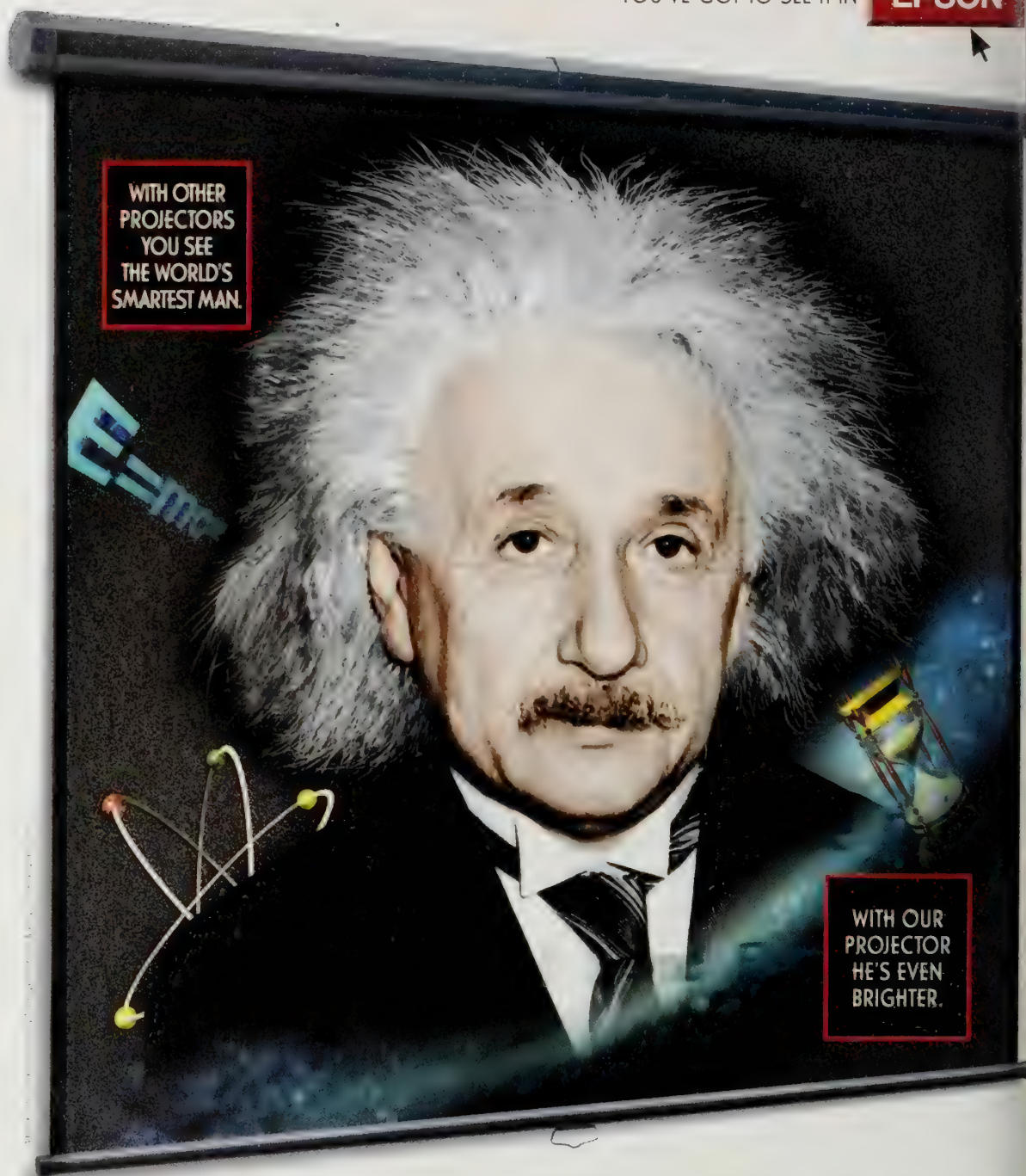
The core objectives of visual communication remain the same, but "we are seeing huge changes in the tools and techniques for visual communication, particularly in the distribution methods," says Eugene Kutina, director of communications media productions for the health-care provider CIGNA Corporation. "The reach of the media is much greater today. Our target audience is expanding," says Kutina, who develops in-house and traveling presentations for the company's associates.

Disc-Based Delivery

Although color slides and overhead transparencies are still being used in corporations, most business communication involving visual presentation is now computer-based and uses CD-ROMs for conveyance. Before CD-ROMs, the most common digital transport medium for presentations and communication was the floppy disk, which holds no more than 1.44 megabytes of data. Because visual data tends to consume mass quantities of

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STYLING A GLOBAL IMAGE

Conair Corporation lives on style. The 40-year-old privately held company in Stamford, Connecticut, has one of the world's biggest names in personal appliances. Conair, Waring, Cuisinart and Revlon Electrical are just a few of its brands. As the company has grown, so has the task of managing its global image and products. Branding for the \$950 million company has become increasingly important. As one-by-one, its product categories have been commoditized by world markets. The company has responded by consolidating its advertising, package design and corporate communication into a central department. Unlike many companies of its size, Conair doesn't use outside creative services in the United States or abroad. The 60-person in-house design and production team does it all.

All digital photography, illustration, brochures, spec sheets, video, corporate and sales presentations, box design and advertising is generated in Stamford, then disseminated throughout the world. "We want to protect and enjoy the equities we've built into our brand names," he says.

Until this year, the company, which manufactures 90 percent of its goods outside the United States, used express-mail service to transport the CD-ROMs—each containing thousands of media images—around the world. Recently, it made Web-based distribution the standard. All media elements and marketing documents are stored on a server in Stamford, and the assets are managed by a Canto Software system. Conair's creative personnel in Stamford access the server directly through the company network. Remote offices use a Web browser and password to retrieve the material from anywhere in the world.

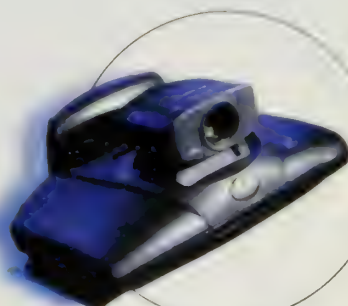
The system greatly reduces the time need to prepare and distribute new advertising and product design, says Dixon. It also ensures that all media remain consistent throughout the company's global trading areas. "Not long ago, creative services [at Conair] was seen as a money-sucking expense. Today, we are routinely included in company strategy meetings and customer meetings," he says.

The globally accessible asset-management system, Dixon adds, gives Conair "greater tactical striking power. We can deliver better service with greater speed."

Images courtesy of Conair



packaging is key to our marketing and communication mix. We are consistent job-to-job, country-to-country and market-to-market," says Bob Dixon, vice president of advertising and communication.



spycam?

cyclops?

hovercraft?

bits and bytes, floppies are a severe bottleneck for moving visuals. CD-ROMs, with 650 megabytes of storage, quickly became a standard storage and transport medium that could be read by almost every computer. Traveling the world armed with highly visual laptop presentations, road warriors often leave CD-ROMs for clients.

Greg Ingram, a sales veteran and the regional vice president of SunAmerica Asset Management, works out of Portland, Oregon, but routinely hits the road armed with a Dell laptop, an InFocus projector, a Kodak digital camera, a portable printer, a cell phone and a Palm Pilot. Ingram, 40, feels he is out in front of most of his peers when it comes to visual presentation, but he acknowledges that his competitors are catching up fast. The value of visuals is



their ability to communicate quickly and to a broad audience, he says. "Most people are very visually oriented these days," he says. "That's how our society is going. It's how we respond to marketing. I have a limited amount of time and have to get my points across very quickly."

Ingram recently assembled a sales presentation using parts of a J.P. Morgan presentation, excerpts from *The Wall Street Journal*, clips from *Barron's*, and a variety of other sources. "It used to take days to pull it all together," he says. "Now I cut, paste and create graphics in minutes. I have become a student of visual communications."

The next storage format to watch is

MASSAGING A MEGA-MERGER

Like most large-scale mergers, the pending alliance between Bell Atlantic and GTE Corporation is complex and arcane. Anyone who isn't very familiar with the activities and inner workings of the two companies would have trouble fully understanding the merger or its anticipated outcome. Nevertheless, because a non-vote is counted as a "no," getting shareholders to vote is critical.

The merging companies took a stab at making the complex comprehensible by setting up a merger portal on the Web at www.mergerinfo.com. "We wanted people to understand what the merger means and why it is a good deal," says Jonathan Segal, manager of corporate interactive media for GTE in Irving, Texas. "We wanted to educate people and prompt them to participate."

Assuming that some shareholders might not be familiar with Web-based information, the site was designed for simple navigation. A minimal amount of text appears on each page. Visitors are not flooded with data, notes Segal. Rather, the site invites them to explore and learn more about the merger at their

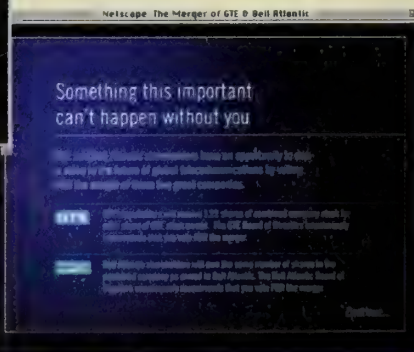
own pace and comprehension level.

The underlying message of the portal is that the two companies were made for each other and that the merger will create a new and exciting business entity. This is underscored by the visual interconnection between the companies and by the more subtle fact that the URL for the merger information portal does not bear the address of either company.

The site features custom-designed graphics that depict the benefits of a symbiotic and friendly merger. Charts and maps are used to illustrate before-and-after scenarios for such things as geographic distribution, employee head count and service offerings. Central to the information site is an interactive brochure that is assembled using software called Macromedia Flash, which converts static text into engaging animation. According to Segal, the brochure is one of the most frequently visited areas of the site. "The combination of visual communications and interactivity changes the way you relate to the content and information," says Segal.

The merger portal was promoted in most or all of the print advertising targeted at shareholders, employees and the financial community before voting began. At the height of the voting activity, Segal reports, the site was receiving 10,000 visitors per week.

Images courtesy of GTE



**"The eyes believe themselves;
the ears believe other people."**

—German proverb



DVD. Consumer DVD and its computer-based cousin DVD-ROM, experiencing a faster rate of adoption than that of CD-ROM. With a capacity of 4.7 gigabytes to 17 gigabytes, DVD are driven in large part by their abil-



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POLYCOM

The new tools of teaming



to store and play two or more hours of high-quality digital video. Some industry analysts expect that, by the end of this year, 40 million DVD-ROM drives will have been installed in computers. According to Cambridge Associates, a research company in Stamford, Connecticut, about 85 million DVD-ROMs will be replicated in 2000—a giant leap from last year's 9 million.

As CD-ROMs and DVDs have emerged as key storage and transport media computer-based video standards have



steadily improved and expanded. Apple Computer began offering jerky, postage-stamp-size video in the early '90s with its QuickTime technology, which today offers VCR- and higher-quality video. Apple estimates that QuickTime has been installed on more than 100 million computers. The latest version, 4.0, has been downloaded from Apple's Web site more than 8 million times since its release earlier this year. Microsoft's Video for Windows (AVI) format and the evolving MPEG standard (DVD uses the MPEG-2 format) are also expanding the reach of digital video.

TRAVELING IN LAPTOP LUXURY

While on the road, Annette Kishon-Pines usually delivers three or four audiovisual presentations per day. Selling her product—luxury train travel and cruises—requires the use of high-quality visual images. If clients can't see what

Proxima data/video projector. Her entire library of 160 images and hours of video exists in digital form on the laptop. A specialized interface lets her customize each presentation only minutes in advance. Interactive features let her jump around within the presentation to emphasize certain products or to answer questions.

The traveling interactive sales program, which contains no text—only pictures—works as well for audiences of one or 100, she says. "I can use it any way I like. I used to have to plan in advance. Now I can show them what I want to show them when I want to show it."

Kishon-Pines had been aware of laptop and CD-ROM-based presentation systems for several years, but until recently, the video display standards were not up to the quality standards she needs. "I'm in a very visual business. I sell a high-quality product with a high-quality reputation. I have to have a presentation that matches." At one point, she looked at AVI files (Microsoft's video format) but decided that their quality at full screen wasn't good enough.

The current presen-

tations, developed by Interactive Inc. of Atlanta, features full-screen MPEG-2 video. Kishon-Pines says she resisted using computer-based presentation until the images could approximate the quality level afforded by color slides. The presentation runs in Microsoft PowerPoint but has been customized to allow Kishon-Pines to make changes without the need to learn the presentation software. "I am not a technically inclined person," she admits. "This system is a breeze. And it impresses the hell out of everybody."

Images courtesy of Interactive Inc.



"The eye is blind if
the mind is absent."

—Italian proverb

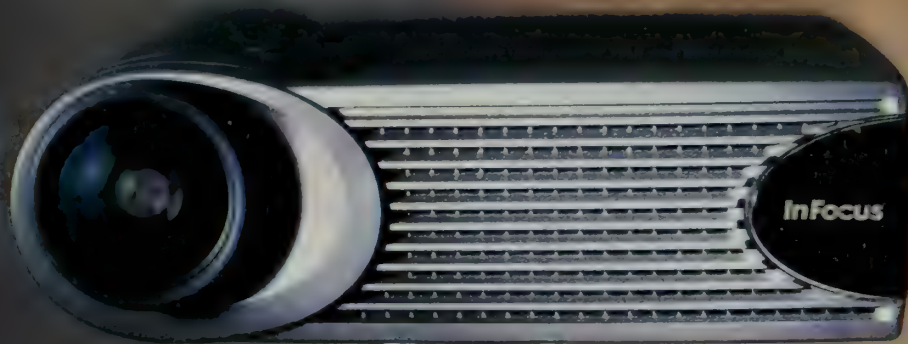
Kishon-Pines is offering, they don't buy.

Until this year, Kishon-Pines would set out from her New York City office armed with a slide show of 120 images, her own slide projector, a set of videotapes and a VCR. She customized individual presentations by selecting and rearranging the slides or by fast-forwarding the videos. If a client made an unanticipated request, Kishon-Pines could do little except describe what the client could not see.

Today, the representative for London-based Orient-Express Trains Et Cruises travels with a Sony laptop computer and

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Wired Conversations

Even videoconferencing, which suffered a slowdown for several years, has resumed a steady growth rate. The resurgence comes from new technology and the growing recognition of visual communication's positive impact on productivity. Dedicated videoconferencing systems and computer-based systems are widely available, but many laptop and desktop videoconferencing systems lack the fidelity of costly proprietary ones. However, as bandwidth and processing power increase, the quality gap may shrink. Microsoft's Windows 95, 98, 98SE and NT operating systems, in fact, are already equipped to handle videoconferencing, though Microsoft acknowledges that few of its users put that feature to work.

Executives are increasingly demanding that moving pictures—pre-produced or live—become part of business communication, because video is about as close as they can get to a face-to-face conversation, says Lee Fehr, president and CEO of Stratosphere Multimedia Corporation in New York City.

"People become more efficient in video communication. They get to the point more quickly," says Fehr, whose company specializes in integrating video-distribution vehicles, such as satellites, telephone and the Internet, to help companies communicate their messages farther, faster and with greater visual impact. Companies that traditionally have seen communica-

LEAPING INTO ONLINE LEARNING

Even the powerful accounting and consulting giant Ernst & Young admits that numbers are not the omnipotent rulers of commerce that they once were. In the emerging knowledge economy, universal connectivity and media-rich communication are every bit as important as number crunching. Technology's role is as much to make the information compelling as it is to

Young, Dean oversees the implementation of new distance learning and training technology.

"Up to now, the language of our business has been numbers and words," says Dean. "As we look to the next century, it's imperative that we be able to communicate in a way that leverages images and sounds."

Three years ago, Ernst & Young began its distance learning programs using satellite communications, then videoconferencing. Both delivery vehicles are still in use. "We thought we were doing great, because we cut down on the need for travel," says Dean. But professionals wanted training to be more frequent, more interactive and at their desktops.

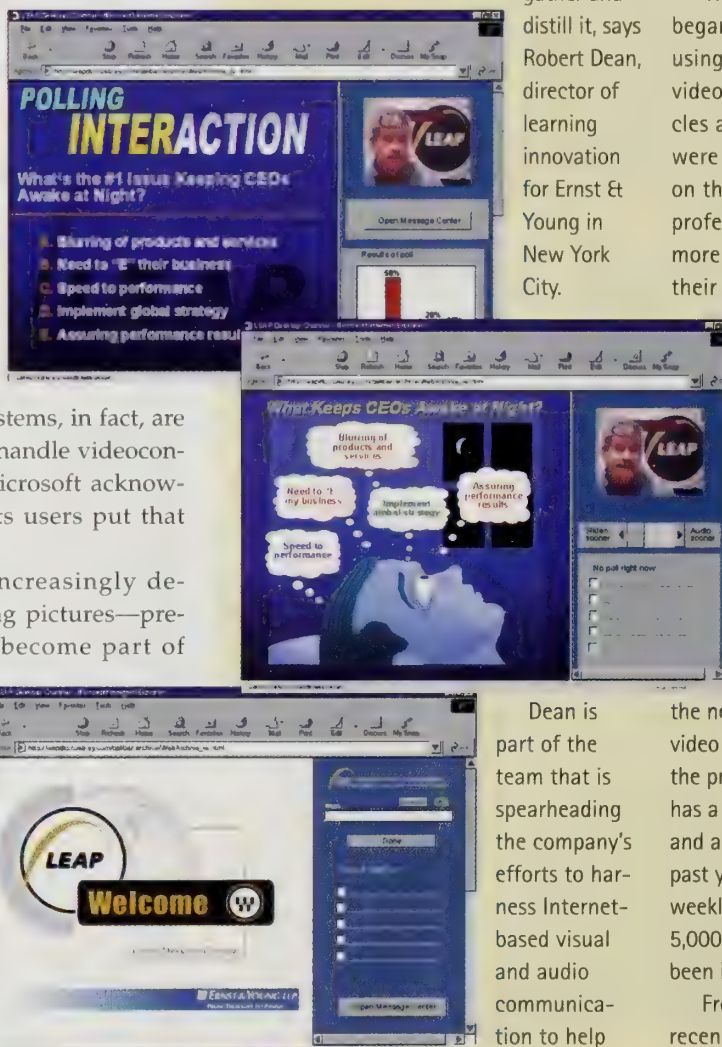
To keep its thousands of mobile professionals up to speed, the LEAP program uses online interactive lessons combined with real-time presentations to deliver business communication, technical training and product briefing.

Based on Netpodium software, the LEAP system allows one or more content experts to deliver slide-show-style presentations, take polls and field questions over

the network. The LEAP system also streams video and audio. Audience members join the presentations from any computer that has a network connection, a Web browser and a streaming-media player. During the past year, the company has been doing weekly Web presentations. So far about 5,000 Ernst and Young employees have been involved.

From his office in New York, Dean recently delivered a presentation to an audience in Florida. The nine-minute presentation generated 90 questions from the audience, all of which were answered by Dean's support team during the presentation.

Images courtesy of Ernst & Young



Dean is part of the team that is spearheading the company's efforts to harness Internet-based visual and audio communication to help

the 28,000-person company maintain peak performance levels in a constantly and increasingly changing environment. As part of the Learning Environment to Accelerate Performance (LEAP) program at Ernst &

tion technology as a path to efficiency are beginning to see it as a strategic opportunity, as well, he says.

Industry analysts predict that won't be long until virtually all businesspeople have videoconferenc-

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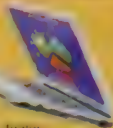


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capabilities at their fingertips. According to Gerry Purdy, president and CEO of the research firm Mobile Insights in Mountain View, Cali-

**"We see things
not as they are but
as we are."**

—Author unknown

fornia, nearly all notebook-computer vendors are planning to build color video cameras into their products in the near future.

The recent surge in videoconferencing has occurred in lockstep with the growth in remote, electronically enabled meetings, says Michael Begeman, manager of the 3M Meeting Network, a division of 3M that studies meeting dynamics. According to a 3M study, in the last 10 years, the number of meetings involving people in multiple locations has increased by 300 percent. A decade ago, 7 percent of meetings involved distributed participants. Three years ago the figure was 15 percent. In 1999, the estimate is 27 percent.

It is important to realize that the rate doubled over seven years, then doubled again over the most recent

The market for proprietary videoconferencing systems is under pressure. Internet-based technology, though not yet comparable to proprietary systems, is threatening the business by being part of products that are cheaper and easier to implement. In recent years, PictureTel Corporation in Andover, Massachusetts, has seen its business prospects fade in and out of focus, but the quality and effectiveness of its videoconferencing products remain unchallenged. Even though the company has a strong story to tell, it is fighting a flood of misinformation and customer confusion.

In an effort to maintain its image and clarify the advantages of its products, PictureTel developed CD-ROMs of information for widespread distribution to its worldwide sales-channel partners. Eighty percent of the company's videoconfer-

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Healthcare

encing systems are sold through partners in industries such as finance, health and education.

The discs contain customer profiles, market data, case studies, white papers, video clips, press releases, advertising artwork, a PowerPoint presentation and other sales tools. The materials are designed to clearly and visually present the PictureTel corporate identity and distinguish its products from the competition.

FILLING THE CHANNEL WITH IMAGES

In addition, the CD-ROMs, created by Quantic Communications of Andover, Massachusetts, are used to teach prospective and existing customers how to properly implement the videoconferencing systems for their specific industries. The discs extend the expertise of PictureTel's marketers to the buyers and sellers, says Tony DeFrancesco, the company's health-care marketing manager. "Only a handful of us completely understand the use of videoconferencing in the health-care field," he explains.

"The need for this sort of visual-communications support has always been

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innovative
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INTERACTIVE VIDEO

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there," says DeFrancesco, but it has become highly critical only in the last 18 months or so." In the last year or two, we have created so much collateral material that we needed a way for our channel partners to access it all in one place," he explains. Not long ago, this

would not have been possible, he adds, but today it can be safely assumed that the channel-partner sales teams have laptops with CD-ROM drives.

DeFrancesco expects only about a 12-month shelf life for the health care and other industry sector CD-ROMs. The next step will be to use the Web as a distribution medium. Beyond that, he says, it is difficult to say what the system will look like. The picture is changing far too quickly to predict.

Images courtesy of Quantic Communications

**improve
patient care**

ACCESS TO SPECIALISTS

PHYSICIAN COLLABORATION

PATIENT RECORD TRANSFER

three years, says Begeman. There is no question, he adds, that videoconferencing, in which participants see each other, and dataconferencing, which lets

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participants share visual information electronically, make meetings more dynamic and productive. At some level everyone understands that being able to see what is being discussed has an enormous productivity potential. "If



audio were good enough, we would not see the tremendous increases in the sale of visual tools," he says.

Microsoft estimates that between 40 and 50 of the largest U.S. corporations already have implemented some form of its NetMeeting software. Part of the Windows 95, 98, 98SE and NT operating system, and accessible through a toolbar in the Office 2000 suite, the program allows users to easily share documents, spreadsheets, pictures and presentations, and see the same data on different remote computers during a teleconference.

NetMeeting adds the visual element that teleconferencing lacks, says Tom Laemmel, Windows product manager at Microsoft. Data collaboration, he adds, is a highly productive tool, as well. It allows work to be done during the meeting, so participants don't need to leave, develop materials, then reassemble for another meeting.

Presenting on the Net

Nowhere is the reach or power of visual

STORYTELLING IN THE INSURANCE FIELD

The products sold by the more than 8,000 insurance agents representing New York Life Insurance Company can't be parked in customers' garages or displayed on their mantelpieces. The agents sell intan-

gible promises of future benefits. To make a sale, they must turn the guarantees into tangible realities, says Tom Shea, vice president. The best way to reach people



**"The eye is small,
yet it sees the
whole world."**

—Yiddish proverb

with the message behind insurance products is by telling them stories, adds Shea, who is responsible for seeing that the field sales force has the tools and training to tell their stories effectively.

business communications more evident than on the World Wide Web. With power and impact that cannot be overstated, the Web is rapidly becoming the business-communication backbone. It is destined to completely reshape busi-

Like many companies, New York Life relies increasingly on technology to reach out to its regional offices and agents. On the road most of the year, trainers are equipped with a complete multimedia presentation that runs on Compaq Armada computers. With graphics and video, the trainers keep agents up to date on new products and regulations. "The training is highly visual. We've gone from almost all words to almost all graphics," says Tom Flournoy, a veteran road warrior who oversees New York Life's field training and agent consulting.

The field agents are furnished with CD-ROMs, which contain manuals and policy forms, as well as other tools that let agents conduct a sales session with clients in their homes or offices. Charts and graphs generated by presentation modules let the agents build scenarios and demonstrate the outcome of various decisions. "The visuals allow for a more personal discussion, rather than just a talking-head sales presentation," says Shea. "These tools carry the story to the customer in a graphical way that numbers can't. An agent with an interactive laptop presentation has far greater impact than if the agent leaves and comes back with a set of numbers," he says.

Continuing its efforts to reach out to the field agents, New York Life has begun letting agents access its intranet. Agents can go online during or after a sales call to find the latest policy information and current client data. Eventually, says Shea, all of the company's visual-communication materials, including video, will be accessible via the Web, allowing the visual storytelling process to begin with the agents and to carry all the way through to the customers.

Images courtesy of New York Life Insurance Company

ness collaboration, just as it is doing the world of commerce. In fact, the two go hand in hand.

The Web is essentially a giant visual network, powered by 2.8 million servers that are home to approx-

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mately 800 million pages. The majority of pages contain some form of graphical communication, and page elements range from simple buttons, still graphics and text to dynamic content such as video, audio and animation. According to IntelliQuest Research, more than 83 million adults aged 16 or older, or 40 percent of the U.S. population, access the Internet—up from 66 million adults during the same quarter in 1998. Another 41 million say they plan to go online in the near future. A study by the research company Computer Economics finds that 37 percent of business organizations already have some form of Web-based business operation in place; another 47 percent plan to implement one in the near future.

"The Web is very visual," says Nicole Vanderbilt, senior analyst at Jupiter Communications, a Web-research firm in New York City. There is a tendency to distinguish between e-commerce and business communication, but at the core they are the same thing, she says. Web-based communication with customers and partners, as well as communication within an organization, is being driven by the Web's astounding reach and speed of delivery.

The Web is raising the standard for visual communication, says Roz Ho, product planning manager for Microsoft. "The people in our focus groups are excited about the visual communications potential of the Web," she continues. "It gives them the means to communicate in ways never possible before."

The Living Network

The latest and most talked about visual communications technology to hit the Internet is streaming video. Audio has been streaming for several years and is already commonplace, but streaming video is more recent—and holds even greater promise. To be streamed, video and audio must be compressed, then placed on

servers to be accessed in real time by anyone with the appropriate media-playing software.

Because of streaming media's tremendous potential to bring television-like programming to the Internet, companies that develop the technology are the darlings of Wall Street these days. But the frenzied enthusiasm is justified. The current developments in streaming media presage a time when

**"You can't depend on
your eyes when your
imagination is out of
focus."**

—Mark Twain

the Internet will, in effect, merge with television, and all of our assumptions about broadcast and computer communications will change forever.

"We will experience a whole new way to coexist with information. It will be a new social experience," says Frank Casanova, director of Apple's QuickTime product marketing. "We are already seeing it on the business side."

RealNetworks, a major catalyst in streaming technology's rise, estimates that its media player has been registered by more than 65 million users. As many as 500,000 Web sites now broadcast RealAudio and RealVideo content, according to Len Jordan, senior vice president of media systems at the Seattle company. One quarter of the top 2,000 companies in the world are using RealMedia for some form of internal communication, training or Web broadcasting, Jordan says.

Eventually, streaming media will be part of every business-communication application, says RealNetworks' Jordan. "One day soon, we will all be

producers of video and audio communications," he predicts.

Not to be outdone in the race bringing streaming media to the masses, Microsoft has developed a complete suite of tools, Windows Media Technologies, for creating, editing and distributing streaming media. Because of restricted bandwidth, streaming video is not yet widespread in the general Internet market, says Gary Schare, lead product manager for Windows Media at Microsoft. "Inside the corporate firewall, there is plenty of bandwidth, and companies are already finding a variety of applications for streaming media," he says. The key applications so far are corporate communications and online training.

Looking for the Link

Whatever the technology, visual communication is at the core of human social, political and economic experience. We live in a see-it-to-believe-it world. Commerce and human socialization depend on the transmission of information and ideas, and, in most cases, visual communication is far and away the most common and most effective way to achieve them.

It is debatable whether our technology will ever afford us the communication miracle of an electronically re-created, face-to-face conversation that looks and feels exactly like an in-the-flesh experience. We may never master cyber-meetings that are indistinguishable from the real thing, yet it is certain that we will not stop trying. For businesses and business people, the Holy Grail of communication will always be—as it always has been—connecting in a way that makes others say, "Aha! I see!"

Robert L. Lindstrom is president of C60 Communications, executive director of the Digital Exploration Society and the author of Business Week Guide to Multimedia Presentations. You can reach him at rlindstrom@digitalexplorers.com.

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So You Think You're Covered

Your policy may lapse if you can't pay higher premiums

BY MIKE McNAMEE

If you bought life insurance in the 1980s or early 1990s, your mail may bring you unpleasant news: Your policy may be about to implode. A spell of low interest rates has undermined millions of cash-value life insurance policies sold when rates were at historic double-digit highs. Insurers designed these policies around the promise that healthy investment earnings could reduce, or eventually eliminate, the premiums policyholders had to pay.

But as rates fell, insurers' investment returns couldn't keep up with the low-premium promise. The result: More holders are getting notices that their policies' cash values are spiraling downward, forcing hefty boosts in costs. "I've seen premiums double, triple, even quadruple—it all depends on how far off the mark the sales presentation was," says Stanley Hargrave, a certified financial planner and insurance consultant with IMS/CPAs in Riverside,

Calif. The alternative to paying more: Let the policy lapse—an option that may mean going without insurance for clients whose age or poor health make them uninsurable.

Given those ugly choices, it's little wonder lawyers are circling. Class-actions charging Prudential Insurance and dozens of other insurers with misleading sales practices have already reaped billions of dollars in damages—and millions in legal fees. The biggest suits involved so-called "vanishing premium" policies, where agents

promised that high investment returns would make the policies self-funding in just a few years.

Most of those cases have been settled, and policyholders are getting notice of their awards, which are usually in the form of discounts on new policies.

Imploding policies are next, says Robert Scott, a Newport Beach (Calif.) attorney who chairs the American Bar Assn.'s life insurance panel. "The insurance industry sold these policies with expectations that the companies now

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can't meet," he says. "So class actions are popping up."

The policies most likely to implode are those called universal, or adjustable-premium, life. Introduced in 1979, universal life lets a customer vary the policy's face amount—the death benefit—and the premiums paid. Most universal life buyers took high interest rates as an opportunity to buy more insurance for less cost, paying the minimum premium necessary, based on rates when they bought the policy.

Trouble is, those low premiums aren't guaranteed: If the insurer suffers rising mortality costs (the funds needed to pay death benefits), or falling interest rates, the customer may be forced to pay more premium or cut the death benefit. Mortality costs have actually trended down, but rates have fallen faster: 10-year Treasury notes, a proxy for the intermediate-term bonds insurers like to hold, averaged 13.91% in 1982 but fell to 8.55% in 1990. They now yield about 5.8%. Subtract a few points for expenses, and insurers are earning little more than the 3.5% to 4% minimum they guarantee policyholders.

How do you know what your insurer is paying? The policy itself is little help: Insurers aren't required to spell out how they compute the earnings they credit to policyholders. "Universal life should be like an adjustable-rate mortgage: The bank tells you how it computes its rate, based on a published index," says Ronald Parry, an attorney with Arnzen, Parry & Wentz in Covington, Ky., who is pursuing two class actions over imploding universal life policies. But insurance "is an industry allergic to disclosure," says Joseph Belth, professor emeritus of insurance at Indiana University. "Insurers say their investment returns are trade secrets."

SIGNS OF TROUBLE. If you have a universal life policy, you should receive an annual statement showing how your policy is faring. Dig up your latest statement and, if you can find it, the sales illustration—the forecast, prepared by your agent when you bought your policy, that shows how its costs and cash value were projected to build over time. The illustration was probably based on a rosy view of interest rates at the time of purchase; the annual statement uses actual current rates. Compare what the illustration says your cash value should be by now with the actual cash value from the statement. If your cash value isn't keeping up with the projection, your policy is headed for trouble. (Two other flavors of life insurance allow fluctuating investment returns.

Those policies—called variable life and variable universal life—allow self-directed investment. The owner tells the insurer how to split the value among mutual fund-like pools, called investment accounts. Because these policies are sold as investment accounts, holders keep a better eye on how they're faring.)

The average policyholder, of course, can't read what type of insurance he or she bought—annual statements "usually go straight into

the shoebox where you keep your policy," says John Maurer, president of Low Load Insurance Services, a Tampa firm that financial planners buy for cost insurance for their clients. So the first sign of trouble is a notice that the policy's cash value is running low, or even exhaustion. By that point, "the cost of rescuing the policy may be overwhelming," says John Baldwin Jr., president of Baldwin Financial Systems in Northbrook, Ill.

Whether you've got a notice or unearthing signs of trouble in your annual statements, your first stop should be the agent who sold you the policy. Ask for a sales "in-force illustrations" and recalculate the policy's

future. You want to know two things: How long the policy will last if you keep paying the current premium, and how much more you'd have to pay to maintain the current death benefit until your target age. You also can ask for illustrations based on a reduced death benefit. If your insurer is crediting your policy with more than the minimum guaranteed return, ask for a guaranteed illustration so that you will have a worst-case scenario.

Those calculations will help you figure out your options. If your need for life insurance has changed, you might get by with a smaller amount—or no policy at all. More likely, though, your choice will be either to boost the premium or to shop for a new policy.

Some experts suggest you hire a fee-only insurance consultant to analyze your situation and represent you. Low Load Insurance Services (254-4429; E-mail: lowload@gte.net) or the National Association of Personal Financial Advisors (www.napfa.org) can give referrals. But "most good insurance agents are independent enough to defend your interests," says Charles Ratner, national director of personal insurance consulting for accountants Ernst & Young.

Insurers are constantly introducing new products. Today's policies may cost less than your 10-year-old plan—even though you're 10 years older. But if your health has deteriorated or your policy is near exhaustion, you might have to lean hard

Anatomy of a Life Insurance Implosion

UNIVERSAL LIFE POLICY Bought by a 41-year-old man in 1984

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THE POLICYHOLDER'S OPTIONS

- ▶ Boost annual premiums to \$14,184.
- ▶ Cut the death benefit to \$401,000.
- ▶ Let the policy lapse at age 68.

DATA: LOW LOAD INSURANCE SERVICES INC.

"The insurance industry sold these policies with expectations that the companies now can't meet"

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your insurer to give you a replacement. "Almost every insurance company has a low-cost policy that they never advertise but can use when they're under the gun," says consultant Hargrave. And having just been through nasty litigation over unkept sales promises, insurers are under the gun—which should work in your favor.

Today's insurance buyers have it better: 35 states have moved to adopt rules that would re-

quire more realistic sales illustrations, including worst-case scenario and a projection based on interest rates halfway between current and minimum rates. And universal life policies bought at today's low rates could produce pleasant surprises. But holders of older policies may be sitting on ticking time bombs. They need to know—or that "boom" they hear may be the sound of their life insurance protection collapsing.

Finding Gold In Oldie Stocks

Companies serving seniors make good long-term bets

BY MARCIA VICKERS

Investing in stocks that cater to a graying population may offer a golden opportunity. The over-50 crowd today accounts for more than \$2 trillion in income, double that of 10 years ago, and more than half the discretionary spending power in the U.S., says Age Wave, a marketing consultant in Emeryville, Calif. And since older people are living—and staying active—longer than earlier generations, their market sway is likely to last for a while.

If you're shopping for stocks that are gray plays, you have lots of choices—from travel and financial-services companies to pharmaceuticals and biotech. The trick is to find the leaders in these sectors. And take a long-term view, since the gray theme will be playing out over the next 20 years or more, as baby boomers move through their twilight years.

Take Carnival Cruise

Lines. It's the dominant company in the cruise business, a sector that is poised to grow 15% to 20% annually over the next five years. Carnival has been shaken lately because of disclosure over its handling of onboard sexual assaults, but some analysts say this shouldn't affect the company in the long term. "Its fundamentals are strong, and they should remain so," says John Bucholz, chairman of money manager Vanguard Capital in Washington D.C. Carnival, which has a strong management team, not only holds 60% of the market, but serves both high- and low-income customers. Analysts estimate its long-term earnings growth to be around 17% a year.

Marriott International, meanwhile, is a leader in gray play for two reasons. Its Marriott International Club International unit holds 7% of the time-share market, a \$6.2 billion industry,

according to the American Resort Development Assn., is likely to grow 15% annually over the next 15 years.

Marriott owns 41 high-end timeshare resorts and will open 10 new priced locations in 2001, broadening its market. In addition, Marriott operates assisted-living communities. Marriott Seniors Living Communities has 131 facilities; another 23 will open by the end of next year. Marriott's long-term earnings growth is estimated at 16% annually.

The financial services industry, meanwhile, is expected to get a boost from the over-50 set managing its money. This group now accounts for 80% of all personal wealth in U.S. financial institutions, says Age Wave. In this sector, look for breadth of services as well as market size. Marc Acuff, chief equity strategist at Monmouth Smith Barney, singles out Citigroup as a "suitable" choice because it's "into everything" from insurance and annuities to management and brokerage services. Erik Gustafson, a portfolio manager at Stein Roe Mutual Funds in Chicago, favors Citigroup for similar reasons. Estimates for long-term earnings growth for Equitable and Citigroup are 15% and 20%, respectively.

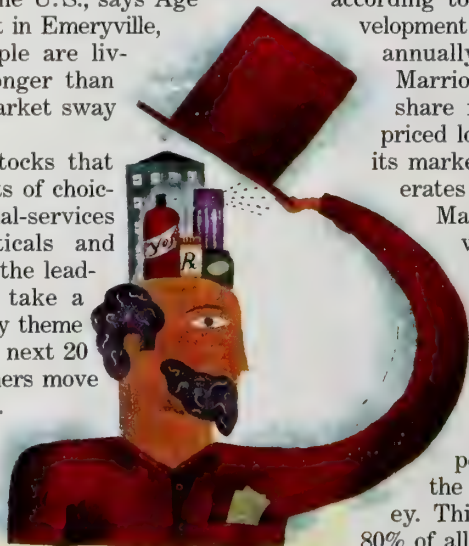
There's no lack for gray plays, but the challenge in finding green in the market is to narrow your choices.

Gray Plays

COMPANY (SYMBOL)	STOCK PRICE*	P/E**	DESCRIPTION
BRISTOL-MEYERS SQUIBB (BMY)	65½	32.04	Coming out with new hypertension drug
CARNIVAL CRUISE LINES (CCL)	42½	26.12	Dominant player in the cruise business
CITIGROUP (C)	42½	15.41	Global financial supermarket
EQUITABLE COS. (EQ)	58½	14.03	Financial services conglomerate
MARRIOTT (MAR)	35½	21.20	Lodging giant with time-sharing
MEDTRONIC (MDT)	68½	36.83	Makes implantable health devices
PFIZER (PFE)	32½	39.79	Has popular new arthritis drug

* Aug. 6 **Based on estimated 1999 earnings

DATA: BLOOMBERG FINANCIAL MARKETS



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Japan: Everybody Back In the Pool

Restructurings are giving investors new faith

BY TODDI GUTNER

Global investors are justifiably skittish about dipping into Japanese stocks. First, the market is already up some 30% so far this year. And past rallies in this decade have quickly fizzled. But many Japan watchers believe the market still has a long way to run. For the buy-and-hold investor, that means a Japan mutual fund might be a prudent way to offset the risk of a downturn in U.S. stocks. "There is plenty of skepticism about Japan," says Paul Quinsee, chair-

folio manager of the Warburg Pincus Japan Growth fund, says he's "looking for companies that are changing Japan or changing with Japan" and cites consumer electronics giant Sony as an example. Sony's \$2 billion cut in inventory, its labor force reduction, and plant closures are reasons to expect strong returns. "Our recent financial results were better than expected, and there is still more good news to come," says Edwards.

NIMBLE. Edwards also heads up the Warburg Pincus Japan Small Company fund, which had year-to-date returns through Aug. 5 of 119.38% (table). One reason for the recent success of small-capitalization stocks is that smaller companies can move quickly to make the necessary changes to survive in the new economy. On the downside, small companies have a hard time obtaining financing for expansion. As a result, small stocks—and the funds—are extremely volatile.

You can gain exposure to the sector with less risk through Japanese growth funds, which generally hold about 20% in small stocks. Small

make up about one-third of the Liberty-Newport Japan Opportunity fund. "I buy across all market caps, in sectors, the 35 best companies," says manager David Smith. One of the biggest holdings is Shokkoh, which despite its name, is a mutual fund but a popular nonbank financial company. Bank financials make loans to companies who can't get money elsewhere. The business is extremely profitable when you consider the loans have interest rates of 25% to 30%, while the cost of funds is only 2.5%. In the past 14 years, Shokkoh has a compound annual growth rate of 40%. "Not bad for a company operating in a sick economy," says Smith.

Another small-cap favorite is retailer Don Quijote. Part department store, part convenience store, Don Quijote has broken from Japanese tradition by tying pay to sales. It has also expanded its hours until midnight—45% of its business is done after 8 p.m. "These entrepreneurs really carved a niche for themselves," says Smith.

A portfolio with a mix of large- and small-cap stocks is the T. Rowe Price Japan Fund. Manager David Warren focuses on quality companies with strong balance sheets and sustainable growth. "We're looking for sustainable growth at a reasonable cost," says Warren. About 30% of his portfolio is in technology stocks. Somewhat alone is computer maker Fujitsu, which recently announced an Internet plan. He also owns Softbank, which invests in Internet startups and has a significant stake in Yahoo! in the

If you go for a Japan fund, you're not likely to see the sizzling returns of earlier this year. But the economy is finally headed on the right track. Japan funds will continue to ride up with the

Room To Grow?

FUND	TOTAL RETURN*		EXPENSE RATIO
	YEAR-TO-DATE	3-YEAR	
WARBURG PINCUS JAPAN SMALL CO.	119.38%	15.80%	1.75%
FIDELITY JAPAN SMALL CO.	117.54	14.65	1.23**
WARBURG PINCUS JAPAN GROWTH	93.14	21.02	1.75
LIBERTY-NEWPORT JAPAN OPPORTUNITY	62.46	NA	2.00***
T. ROWE PRICE JAPAN	51.13	4.56	1.32
JAPAN	48.62	11.67	1.26

* Through August 5

** Fund also has 3% front load

*** Fund also has 5.75% front load

NA=Not available

DATA: MORNINGSTAR INC.



man of the International Equity Strategy group at J.P. Morgan. "But when everyone agrees that everything is wonderful, that's when it's time to move on" and invest elsewhere.

Underlying the bullishness on Japan is the belief that the eight-year recession has bottomed out and that real economic changes are taking place. The government has injected money into the banks on the condition that they restructure and improve disclosure standards. That has helped to restore consumer confidence in the banking sector. And the willingness of leading companies such as Mitsubishi Chemical, Asahi Glass, and NEC to fire employees and close inefficient plants indicates "there is a great restructuring going on," says Charles Clough, the global equity strategist at Merrill Lynch. For the first time, corporate management is committed to improving profitability and shareholder value.

Because restructured companies should help prop up the stock market, top fund managers have sought them out. Nicholas Edwards, port-

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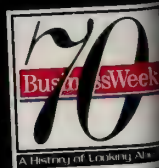
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On September 28, 1999, *Business Week* magazine will celebrate its 70th anniversary with a very special event in New York City. A select group of accomplished leaders from American business and politics will gather at The Waldorf-Astoria Hotel for a private, invitation-only meeting to consider the most important challenges facing American business at the turn of the millennium. This exclusive group will then be our guests at a gala dinner to celebrate 70 years of *Business Week* that evening at The New York Public Library.

The *Business Week* CEO Summit is an exclusive event reserved for the world's most eminent business leaders. This year's participants already include chief executives from: American Home Products Corporation; Archer Daniels Midland Company; The Black & Decker Corporation;



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Compaq Computer Corporation; Eli Lilly and Company; Frito-Lay; Goldman Sachs Group; Hasbro, Inc.; McKinsey & Company; Redon; Sears, Roebuck and Co.; Tandy Corporation; Toshiba America and Walgreen Co., among others. To ensure privacy and to promote candid discussion, all sessions will be conducted in a closed-door setting. Among the topics to be addressed are processes and strategies for succeeding in an integrated global economy, as well as assessments of past and future leadership skills.

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THE GOLDMAN TOUCH: WORTH THE PRICE?



BY ROBERT BARKER

Mutual funds let you play with the big leaguers at Goldman. But evidence shows the costs may outweigh the rewards

No name on Wall Street conjures market smarts and the riches they bring like Goldman Sachs. So getting close to Goldman is a temptation many individual investors would fall for, if only because for its first 130 years, the firm saved itself primarily for such big institutional clients as Ford and Microsoft.

Until now. More and more individuals are gaining access to the firm's investment ideas and trading prowess via mutual funds. In 1996, Goldman sold a handful of funds through two primary distributors. Today, 44 funds managed by Goldman are available via 750 outlets, including E*Trade Group, where you can point and click your way into the tent shared by primo market savant Abby Joseph Cohen.

Just don't look to get in cheap. As you'd expect from Goldman's reputation, its funds come at premium prices, with relatively high annual fees plus sales charges that begin at 5.5% and fall to zero for \$1 million-plus accounts. The loads and fees apply whether you use a broker or buy direct.

What does this get you? "The goal is consistent, above-benchmark returns, net of fees and adjusted for risk," says David Ford, co-head of Goldman Sachs Asset Management. Setting Goldman apart in pursuit of that grail, Ford told me, are its storied strength in global investment research, as well as proprietary risk-management software that can be cranked up to divide a portfolio among all the world's financial assets for optimal return at minimal risk.

Sounds good. And while that refrain is one

you can hear any hour of any day all along Street, I won't gainsay the potential of man's acumen. Goldman didn't become Gold by losing clients' money. Since 1981, for example, private accounts run in a way similar to brand-new Strategic Growth Fund beat the Standard & Poor's 500-stock index in 14 of 18 years good for an average edge of more than percentage points a year.

Just the same, in the short lives of most man funds, the evidence of benchmark-beating risk-adjusted returns is mixed. "Given Goldman's resources," Morningstar analyst Dan Kober says, "you'd think they'd come up with something more impressive." By Morningstar's reckoning, just 7 of the 15 Goldman funds that are at least three years old beat benchmarks after accounting for risk. Among the winners: the Capital Growth and International Equity funds.

Goldman Sachs Global come. Its asset allocation funds also are off to a good start.

So are Goldman funds worth your attention? Yes, if you've already budgeted for a broker's advice. If not, they would add to your investment costs. The higher costs create an effective bet

Goldman can translate what works at lower prices for its big-money clients into sharply above-average returns for you.

COMPARE. To quantify that gamble, I used a neat tool at this Web site: www.sec.gov/mfcc-int.htm. There you'll find the Securities and Exchange Commission's Mutual Fund Cost Calculator, which lets you compare what one more fund would return, given different holding periods, and expected annual return. I assumed a \$500,000, five-year investment. I chose a fund that figures to benefit from the firm's resources: Goldman Sachs Growth Income Strategy Portfolio, a global asset allocation fund with 60% of its money in stocks and 40% in bonds. Against it, I pitted the comparable, but cheaper TIAA-CREF Market Allocation Fund. Finally, I assumed the TIAA-CREF fund would return only the historic average of 9.8% a year for 60% stocks and 40% bond portfolios.

Assuming the Goldman fund beats the historic average by one percentage point a year, the gamble on Goldman would leave an investor \$19,179 poorer. If Goldman's market smarts add two percentage points annually, the bet would pay, but at steep odds: \$59,475 in higher costs to get an extra \$15,896.

Can you resist those odds? I can, too.

For barkeronline, go to www.businessweek.com/investor/ or AOL, keyword: BW Daily



The Goldman Gamble

If you've got \$500,000 to invest for five years in a 60% stock, 40% bond portfolio, you might buy a TIAA-CREF fund and expect returns close to the historic 9.8% average for this type of fund. Or you could bet on better returns from a higher-cost Goldman fund. Below, you can see the amount you would wind up with if the Goldman fund beat TIAA-CREF by one percentage point or two.

	TIAA-CREF MANAGED ALLOCATION FUND	GOLDMAN SACHS GROWTH & INCOME STRATEGY PORTFOLIO CLASS A	
		SCENARIO 1	SCENARIO 2
ANNUAL AVERAGE RETURN	9.8%	10.8%	11.8%
TOTAL COSTS*	\$15,439	\$71,623	\$74,914
INVESTMENT VALUE AFTER FIVE YEARS	\$782,522	\$763,343	\$798,418

* Fees plus foregone earnings on capital lost to fees

DATA: GOLDMAN SACHS, TIAA-CREF, SECURITIES & EXCHANGE COMMISSION, BUSINESS WEEK

QUESTIONS? COMMENTS? E-mail barkerportfolio@businessweek.com or fax (407) 728-1711

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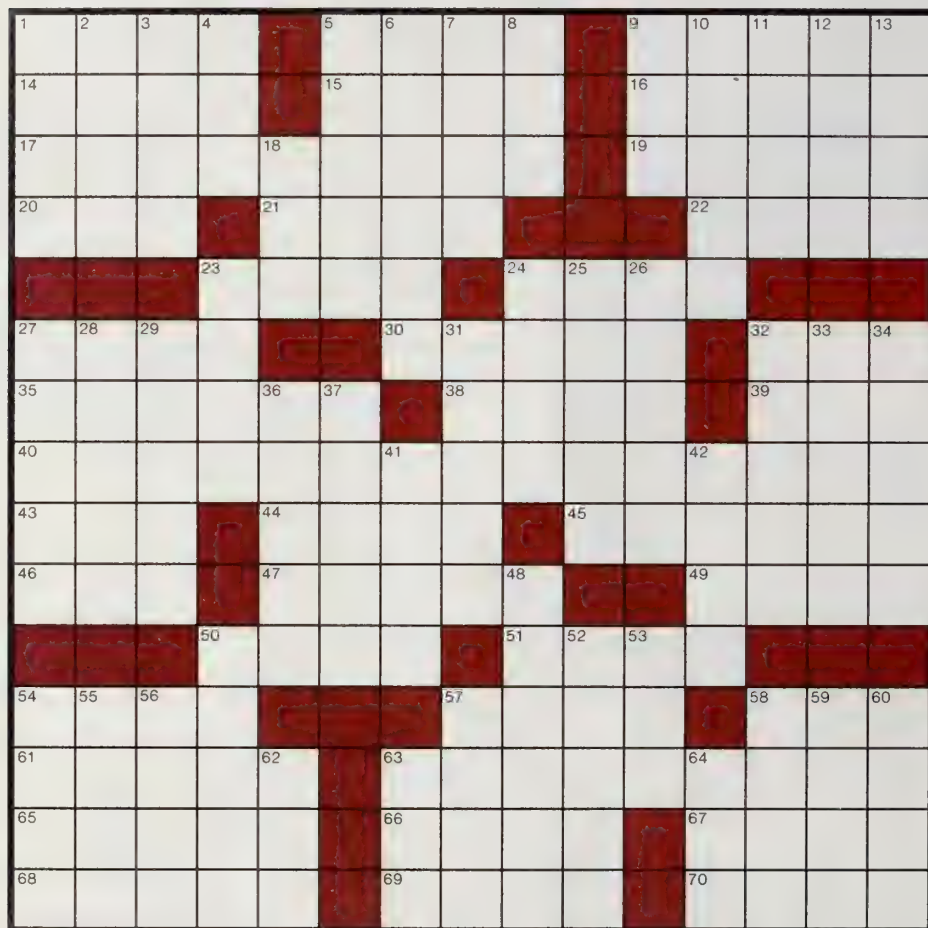
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Mixing Business with Pleasure by Lincoln

Puzzle #16



ACROSS

1. Name on 2,400 gas stations
5. Russian river
9. Union founded by Gompers: Abbr.
14. Hong Kong's home
15. Immunological agents
16. Cash in Kiev
17. The Internet is squeezing him out
19. Hemline locale, perhaps
20. ___ in "Ebay"
21. Major, for one
22. Industrial coloring
23. Appointed position
24. Figures a total
27. Big name in haute couture

30. S&L customer
32. Alias: Abbr.
35. Came to terms
38. Prefix for gram
39. West Coast airport
40. Real-options analysis tool
43. Ordinal ending
44. OAS member: Abbr.
45. Cable ancestor
46. ___ Paulo
47. Type of trousers, for short
49. Auction stipulation, often
50. Eye annoyance
51. Chicago paper, familiarly
54. Mascara target
57. French city

58. WWII price-regulating agency: Abbr.
61. Power source
63. "Built from Scratch" subject
65. Maker of the first successful video game
66. St. Moritz setting
67. Salon order
68. 10th U.S. president
69. Medicinal amount
70. Makes a decision

DOWN

1. It may be zero-sum
2. Fulbright Program administrator: Abbr.

3. Jar tops
4. Pet rocks, once
5. Software buyers
6. Sends payment
7. Smell ___ (be suspicious)
8. Linked-computer setup: Abbr.
9. Biblical boat
10. Endows
11. Toe the line
12. Bailey of the bar
13. Subtracted by
18. One way to take over: Abbr.
23. Test ___ (Princeton Review business)
24. California Perfume Company, today
25. Dental-insurance giant
26. Took the wheel
27. Some Scandinavians
28. "___ Kick out of You"
29. Brand for Scotts or Johnson & Johnson
31. "Damn the tuxedos, full speed ___" (see ad at right)
32. Chalmers' onetime partner
33. Hawaiian island
34. Skating maneuvers
36. Put up a building
37. Radar deceiver
41. Steady-handed
42. 58 Down minister, perhaps
48. Major income source for some smaller nations
50. Piece of the action
52. Piece maker
53. Neither Democratic nor Republican: Abbr.
54. College exam of a sort
55. 12 Down's professional
56. Corporate-document neologism
57. Coors' headquarters: Abbr.
58. Cartel with a Web site
59. Red wine
60. Late-night cash sources
62. Russian space station
63. Ordered for lunch
64. Clean Air Act enforcer

For answers to this puzzle:

Turn to page 237 in this week's issue of Business Week or visit Mixing Business with Pleasure by Lincoln on www.businessweek.com (URL: www.businessweek.com/adsection/puzzlesbylincoln/index.htm)

Puzzle created by: Stanley Newman.


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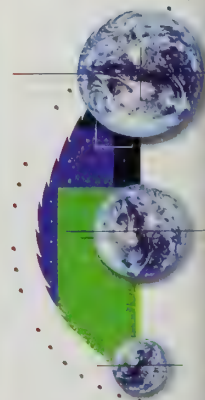
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THE WORD: PLASTICS



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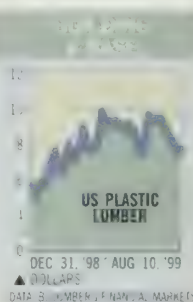
It's a lazy summer afternoon. You're grilling steaks on the barbecue while sipping an ice-cold beer and chatting with friends you invited to enjoy your new backyard deck—a plastic lumber deck. O. K., it sounds a little tacky. But if you can get by the plastic thing, take a look at U.S. Plastic Lumber (USPL), the premier producer of this product. The Nasdaq stock now sells at 7½, down from 10 earlier this year.

CEO Mark S. Alsentzer says a 12-by-16-foot deck built with his plastic lumber costs about \$3,400, vs. \$3,000 for pressure-treated wood. But plastic doesn't splinter, chip, or rot, nor is it subject to insect infestation, and you don't have to paint or stain it. There's an environmental plus, too. Not only does it save trees, but it is made from recycled plastic. Home Depot introduced the product in 22 California stores, and Alsentzer says the chain is adding it in Hawaii and Chicago area stores. The company is ramping up, too, quadrupling capacity and planning to take plastic lumber sales from \$44 million this year to \$112 million next.

That's not all. About 60% of USPL's revenues come from its Clean Earth unit, which dredges and then decontaminates toxic sludge, turning it into a cement-like substance for such uses as restoring strip-mined areas. It recently won a dredging contract for the New York harbor.

With a market cap of less than \$200 million, this Boca Raton (Fla.) company is barely on Wall Street's radar. Lancer Partners, a hedge fund, is the largest outside shareholder, with 2.2%. Insiders own about 30% of the stock.

William S. Brennan of Pacific Growth Equities, an institutional research boutique, thinks the company will be getting more attention as it builds earnings. Second-quarter profits hit 7¢ a share fully diluted vs. 2¢ a year ago, restated for an acquisition. His target for the stock: 16 a share within the next 12 months.



A TOWERING OPPORTUNITY?

Cellular phone companies would rather sell service than build and operate the towers that make the calls connect. Those are coming under the ownership and management of companies like American Tower (AMT), which rent the towers back to the service companies. In fact, on Aug. 9, the Boston company acquired 2,100 towers from Vodafone AirTouch



through a 99-year lease. That brings the company up to 7,100 towers in the U.S. It also will build an additional 400 to 500 towers for Vodafone. Investors were unimpressed with the deal—and just about everything else the company is doing. The Big Board stock, at 20½, is down from near 30 at the end of 1998.

But some savvy investors think the stock is a steal. "It's got exceptional management and a powerful cash flow," says David Wilmerding of Nevis Capital Management in Baltimore. The stock is one of the few in the Nevis Fund—up 159% from January through July—that hasn't gone up this year.

Merrill Lynch analyst Keith Fawcett says all the tower stocks are down because the industry raised \$2 billion in initial and secondary offerings this year. But a temporary stock glut is often an opportunity. In fact, on Aug. 10, institutional investor Wellington Management said it had increased its shares from 10.2 million to 15.1 million in the second quarter, giving it a 10.5% stake.

American Tower reports losses—the Street estimates 35¢ a share this year, mainly due to amortization and depreciation. But those are noncash charges, so the company generates plenty of cash for expansion. The business model is similar to that of cable TV and radio in which the payoff comes in cash flow long before earnings.

Building a tower costs around \$200,000, but it has a 30-year expected life, requires little maintenance, and best yet—the operating margin is 85% to 90%. Wilmerding thinks once the company reaches its goal of 15,000 to 18,000 towers, shares will be selling at 80.

ZEBRA: IT SCANS FOR A 'BUY'

Zebra Technologies (ZBRA), the dominant maker of bar-code printers, is on a tear. At 46½, the stock is up 56% so far this year, but it's still a compelling buy, says Andrew Stephens, portfolio manager of the Artisan Mid Cap Fund.

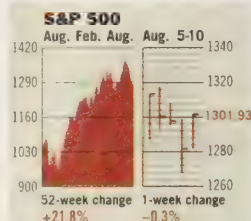
Consumers have long been used to bar codes on the items they buy. But bar coding is becoming as commonplace in the manufacturing sector as it is in retailing. "It's part of just-in-time inventory," says Stephens. He says bar-coding technology also plays a role in inventories for E-commerce.

Stephens says Zebra's new products and markets could take its top-line growth to 20% from 15% and expand operating margins to 30% from 24%. The Street estimates Zebra will earn \$2.14 per share this year and \$2.58 next year. If so, this gives the stock a p-e of 18. Stephens thinks Zebra will beat the estimates, and the stock will reach 60 to 65 in the second half of next year.

Gene Marcal is on vacation.



STOCKS



COMMENTARY

The overall market indexes showed little change for the week. The Dow industrials rose slightly, as did the Nasdaq Composite, while the S&P 500 slipped a smidgen. Internet stocks, which had taken a pasting over the last few weeks, managed to rally 2.6% as measured by the American Stock Exchange Internet Index. Still, that index is down almost 20% from a month ago.

Data: Bloomberg Financial Markets

U.S. MARKETS

	August 11	Week	Year
Dow Jones Industrials	10,787.8	1.1	27.5
Nasdaq Composite	2565.0	1.0	43.1
Nasdaq 100	2241.8	1.7	68.5
S&P MidCap 400	396.2	0.1	20.7
S&P SmallCap 600	177.2	-1.0	4.7
S&P SuperComposite 1500	273.9	-0.3	21.1

SECTORS

	August 11	Week	Year
S&P/BARRA Growth	728.4	-0.2	24.7
S&P/BARRA Value	593.2	-0.4	18.2
S&P Basic Materials	138.5	1.5	22.5
S&P Capital Goods	978.4	-0.4	22.1
S&P Energy	901.3	4.6	32.4
S&P Financials	130.1	-1.5	4.6
S&P REIT	79.4	-1.5	-13.7
S&P Transportation	651.8	-4.4	4.2
S&P Utilities	253.7	-0.5	10.1
GSTI Internet	371.8	1.8	131.1
Morgan Stanley Cyclical	587.8	0.3	28.3
PSE Technology	597.7	2.9	77.0

BEST-PERFORMING GROUPS

	Last month %	Last 12 months %
Oil and Gas Drilling	16.0	Semiconductors 101.9
Gold Mining	11.7	Instrumentation 92.4
Aluminum	10.6	Aluminum 82.3
Semiconductors	8.9	Computer Systems 75.5
Instrumentation	6.9	Communications Equip. 65.7

GLOBAL MARKETS

	August 11	Week
S&P Euro Plus	1276.9	-1.4
London (FT-SE 100)	6014.4	-3.5
Frankfurt (DAX)	5019.7	-1.9
Tokyo (NIKKEI 225)	17,211.2	-2.7
Hong Kong (Hang Seng)	12,437.8	-8.5
Toronto (TSE 300)	6909.1	-0.8
Mexico City (IPC)	5180.9	0.7

FUNDAMENTALS

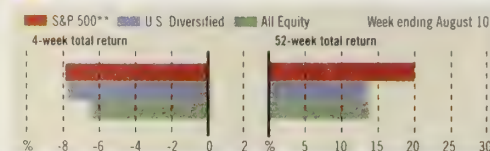
	August 10	Week ago
S&P 500 Dividend Yield	1.29%	1.24%
S&P 500 P/E Ratio (Trailing 12 mos.)	30.1	31.2
S&P 500 P/E Ratio (Next 12 mos.)*	22.7	23.5
First Call Earnings Revision*	-0.18%	-0.27%

*First Call Corp.

TECHNICAL INDICATORS

	August 10	Week ago
S&P 500 200-day average	1271.7	1265.9
Stocks above 200-day average	40.0%	48.0%
Options: Put/call ratio	0.62	0.60
Insiders: Vickers Sell/buy ratio	1.41	1.49

MUTUAL FUNDS



Data: Morningstar, Inc.

EQUITY FUND CATEGORIES

Leaders	52-week total return	%	Laggards	52-week total return	%
Precious Metals	6.0		Latin America	-11.4	
Natural Resources	3.3		Financial	-9.7	
Japan	0.1		Mid-cap Growth	-9.3	
International Hybrid	-2.1		Large Growth	-9.2	
Foreign	-2.4		Technology	-8.9	
Leaders	52-week total return	%	Laggards	52-week total return	%
Pacific/Asia ex-Japan	75.2		Latin America	-10.7	
Technology	65.3		Real Estate	-5.1	
Japan	59.0		Europe	-3.6	
Diversified Pacific/Asia	57.0		Financial	-2.0	
Communications	40.9		Small Value	-0.6	

INTEREST RATES

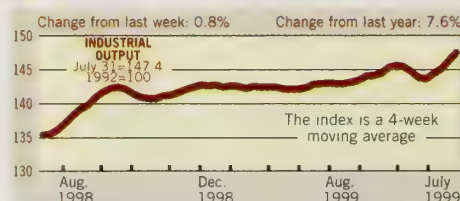
KEY RATES	August 11	Week ago	Year ago
MONEY MARKET FUNDS	4.65%	4.64%	5.10%
90-DAY TREASURY BILLS	4.88	4.75	4.99
1-YEAR TREASURY BILLS	5.19	5.08	5.19
10-YEAR TREASURY NOTES	6.10	5.93	5.38
30-YEAR TREASURY BONDS	6.21	6.10	5.61
30-YEAR FIXED MORTGAGE†	8.23	7.95	6.99

BLOOMBERG MUNI YIELD EQUIVALENT

10-yr. bond	30.7
GENERAL OBLIGATIONS	4.91%
TAXABLE EQUIVALENT	7.12%
INSURED REVENUE BONDS	5.06%
TAXABLE EQUIVALENT	7.33%

†BancQuote, Inc.

BW PRODUCTION INDEX



Information on each of the index components is at www.businessweek.com
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The production index continued to rise last week ended July 31. So, too, the unadjusted index climbed, rising 1% to 149.4. The monthly index moved up to 147.4, a June figure of 143.9. After seasonal adjustment of the latest weekly data, electricity surged 4.5% with the total output for the month at a record high as the heat wave across the U.S. pushed up energy demand. Other components of the index also rose for steel and lumber production.

THE WEEK AHEAD

CONSUMER PRICE INDEX Tuesday, Aug. 17, 8:30 a.m. EDT ▶ Thanks to rising energy prices, consumer prices for all goods and services probably increased by 0.3% in July, says the median forecast of economists surveyed by Standard & Poor's MMS, a division of The McGraw-Hill Companies. Excluding food and energy, core prices likely increased 0.2%. In June, the total CPI was unchanged from May, while the core index edged up 0.1%.

HOUSING STARTS Tuesday, Aug. 17, 8:30 a.m. EDT ▶ Housing starts probably rose slightly in July, to an annual rate of 1.6 million, from 1.57 million in June.

INDUSTRIAL PRODUCTION Tuesday, Aug. 17, 9:15 a.m. EDT ▶ Output at factories, mines, and utilities likely jumped 0.6% in July, when record heat blanketed much of the nation, causing record demand for electricity. In addition, a rise in factory jobs and a longer workweek suggest that manufacturing production increased in July. In June, output was up 0.2%. The average operating rate for all industry likely rose to 80.6% in July, from 80.3% in June.

INTERNATIONAL TRADE Thursday, Aug. 19, 8:30 a.m. EDT ▶ The S&P MMS survey projects that the U.S. trade deficit totaled \$20.5 billion in June, down from a record

\$21.5 billion in May. Exports likely rose in June, after falling 0.8% in May. Imports, which jumped 2.2% in May, were likely unchanged in June.

FEDERAL BUDGET Friday, Aug. 20, 2 p.m. EDT ▶ The U.S. Treasury will probably report a \$22 billion deficit for the month of July, slightly smaller than the \$24.1 billion in July, 1998.

BusinessWeek ONLINE

For more investment data and the components of the production index, visit www.businessweek.com.

Index to Companies

Each page gives the starting page for a story or with a significant reference to a company. Subsidiaries are indexed under their own names. Companies listed only in tables are not included.

Index to Companies (Continued) 117

Index 60

K

Kleiner Perkins, Caufield & Byers 44, 168
KPMG Peat Marwick 26
Kurzban Technologies 117

L

Lancet Partners 235
Lehman Brothers (LEH) 30, 188
Lehman Bear Market Cannon 140
Levi Strauss 170
LG Electronics 6
Liberty Newport Funds 226
Lockheed Martin (LMT) 46
Los Angeles Dodgers 6
Low Load Insurance Services 215
Lucent Technologies (LU) 52, 69, 100, 132, 160

M

Marketec Systems 50
Marratt International (MAR) 222
McDonnell Douglas (BA) 182
MCI WorldCom (WCOM) 44, 172
Media Matrix (MMXI) 13
MediaOne (UMG) 44, 188
Mercer Management 170
Merrill Lynch (MER) 185, 226, 235
Microsoft (MSFT) 6, 18, 44
Mitchell Securities 193
Mitre 90
Mitsubishi Chemical 226
Morgan U.P. (JPM) 226
Morgan Stanley Dean Witter (MWD) 38
Morningstar 230
Motorola (MOT) 46
Myriad Genetics (MYGN) 152

N

NEC (NIPNY) 160, 226
Netscape Communications (AOL) 94
Network Solutions (NSOL) 168
Nevis Capital Management 235
Nextel Communications (NXTL) 168
Nokia (NOK) 59
Nomura Securities 38

O

Owens Corning (OWC) 38

P

Pacific Growth Equities 235
Pathnet 168, 172
Pechiney (PY) 52
Pfizer (PFE) 54
Phillip Morris (P) 54
PricewaterhouseCoopers 26, 168
Primus Telecommunications (PRTL) 168, 172
Procter & Gamble (PG) 52
PSINet (PSIX) 168

Q

Quarterback Investment Partners 182
Qwest Communications (QWST) 69

R

Regional Financial Associates 41, 168
Regis Medical 6, 52
Rite-Chester 94
Roper & Associates 26
Rothschild 6

S

Salomon Smith Barney (C) 59, 69, 185, 222
Santander 60
SBC Communications (SBC) 54
Scania (SCVA) 59
Sears (S) 50
Security First Technologies (SONE) 69
Shohkoh Fund 226
Silicon Graphics (SGI) 52
Sina.com 58
SKF (SKFR) 59
Sloan Securities 94
Softbank 226
Sohu 58
Sonic Automotive 50
Sony (SNE) 132, 226
Soros Fund Management 52
Southwest Airlines (LUV) 52
Spears Benzak 50
Stamps.com (STMP) 52
Standard & Poor's (MHP) 236
State Street Bank 38
Stein Roe Mutual Funds 222
Stratvest Group 38
Sun Microsystems (SUNW) 69

T

Tele-Communications (T) 44
Teledisc 46
Teligent (TGNT) 168
Telogy Networks 168
Texas Instruments (TXN) 168
Timeless Software 58
Torrent Networking Technologies 168
T. Rowe Price (TROW) 226

U

United Airlines (UAL) 18
United Parcel Service 52
U.S. Plastic Lumber (USPL) 235
UUNET Technologies 168

V

viaLink 69
Victoria Capital 222
Vodafone AirTouch (VOD) 235
Volkswagen 6
Volvo (VOLVY) 59

W

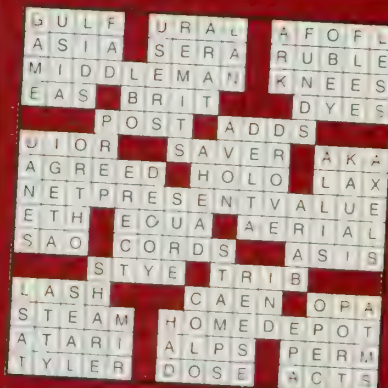
Warburg Pincus Funds 226
webMethods 168
Wellington Management 235
Wells Fargo (WFC) 193
Wilson Sonsini Goodrich & Rosati 168
WinStar Communications (WIN) 172
WorldSpace 168

Y, Z

Yahoo! (YHOO) 44, 106, 226
Yarc Systems 168
Zetron Technologies (ZBRA) 235

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THE 21ST CENTURY: WHAT IF...?

"You can never plan the future by the past."

—Edmund Burke, in a letter to a member of the National Assembly, 1791

On the cusp of every new century, there's a natural tendency to predict what lies ahead by projecting from the present. This may be especially true today when America is in a buoyant mood—confident, prosperous, powerful, and safe from foreign enemies. Won't this just continue well into the 21st century?

Sorry, folks, but the future is more likely to unfold in nonlinear fashion. In the current era of technological innovation, the range of possible outcomes is greater than ever. Unpredictability may make people uncomfortable, but, like it or not, it is our reality. Malthus and Marx both predicted the future—incorrectly, it would appear. The Atomic Age and Space Age were expected to change our lives—but their promise is still largely unfulfilled. And yet, who could have predicted the wild success of the Internet or the incredible spread of talk-anytime, talk-anywhere cell phones?

Peering into the next 100 years, BUSINESS WEEK's "21 Ideas for the 21st Century" is a series of "what ifs," written as possible scenarios for the futures of hedging, computing, biology, management, artificial intelligence, and a host of other subjects, including time itself. Instead of extrapolating from today to tomorrow and drawing lines on graphs to predict the future (back in 1973, experts were projecting the price of oil rising to \$100 a barrel by 1980), we are opting for the options approach. You won't find any tables showing Net usage in 2020 or per capita income in 2040. Just a package of essays inspired by some of the keenest minds around.

NEW VS. OLD, AGAIN

The rationale for this approach is simple: Technological change widens the range of possibilities. But if the last century suggests anything, it's that technology increases the ability to do both good and evil. All the major advances in aviation, automotive transportation, metallurgy, chemistry, and communication which dramatically raised living standards were also used in two devastating world wars. Indeed, eras of extreme technological advance can be the most dangerous. And not only in terms of aggression. The Depression followed a long boom fueled by rapid technological change.

Today, the potential from new technology is staggering. The Net can increase grassroots democracy—or invade our privacy. Continuous communication can increase integration or cause alienation. Globalization can promote growth—or aggravate tribalism. Advances in biochemistry can increase longevity—or beget human cloning.

The danger is that we may be entering an age where the widening polarities of choice are matched by social dichotomies as well. A schism is clearly emerging between the New Economy and Old Economy in America. In the

New Economy, wages are rising fast, corporate profits are extremely healthy, investment is booming, and the stock market is playing a significant role in creating wealth. In the Old Economy, wages are stagnant, profits are weak, investment is flat, and people are not benefitting from options and bonds to a major degree. Policies that benefit the growing New Economy, such as open markets, immigration, and investment in education and research and development, do not necessarily help uncompetitive manufacturing industries.

The potential for political conflict is great. At the preturn of the century, a New Economy-Old Economy dichotomy was also at play. Just as the Information Economy is now superseding manufacturing, manufacturing was then triumphing over agriculture. The resulting conflicts between economic winners and losers defined much of the next century.

CONFLICT—AND OPPORTUNITY

Debt-ridden farmers, in a struggle to survive, demanded a bimetallic standard including silver (easy money) over the pure gold standard favored by industrialists, investors, and bankers. A look at the front pages of the *Sunday New York Times* in the month of August, 1899, shows the headline "More Gold Certificates" above a story about how the Treasury boosted the money supply under heavy pressure from farmers. Even William Jennings Bryan, who lost the Presidential election ("You shall not crucify mankind on a cross of gold"), was in the news.

This same *New York Times* page was full of worries about globalization, with headlines relating to trade with Mexico, China, and Britain; immigration; and disease, particularly the cholera plague spreading across borders (and blamed in part, on immigration). America's role in the world was a major page news, and Presidential candidates battled over isolationism with farmers wanting an expansionist foreign policy while industrialists preferred tariffs and isolationism.

Finally, in 1899, Thorstein Veblen penned his *Theory of the Leisure Class*, deriding the "conspicuous consumption" of the new manufacturing elite of the day, adding fuel to the growing rift between declining agriculture, small business, and small-town America, on the one hand, and ascending big business and big city America on the other. American politics was shaped by this split for much of the next century.

A 21st century defined by a wide range of possibilities promises to enhance all our lives. But smart choices will have to be made. Those left behind must be integrated fully; the potential for political and social tension is enormous. Whispers of Net envy may be the beginning of a battle against New Economy winners. Government policy must be focused not only on supporting the growth of an information-based economy, but the integration of everyone into it. In the next century or so, technology opens another round of challenges and opportunities. No one knows where they will lead, but it is BUSINESS WEEK's goal to illuminate the



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